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REPORT RESUMES

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PROCEDURES FOR IDENTIFYING PERSONS WITH POTENTIAL FOR PUBLIC SCHOOL ADMINISTRATIVE POSITIONS, AN APPLICATION AND EXTENSION OF THE FIRO THEORY OF INTERPERSONAL BEHAVIOR.

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THE PROBLEM OF ADMINISTRATOR SELECTION IN THE FIELD OF EDUCATION WAS STUDIED. THE ISSUE WAS CONCEPTUALIZED AS ONE OF UNDERSTANDING THE INTERACTION OF THE SCHOOL ADMINISTRATOR WITH SCHOOL BOARD MEMBERS, PARENTS, TEACHERS, AND OTHER SALIENT INDIVIDUALS. A THEORY OF ADMINISTRATIVE INTERACTION WAS DEVELOPED USING THE FUNDAMENTAL INTERPERSONAL RELATIONS ORIENTATION (FIRO) THEORY OF BEHAVIOR. INTEGRATED LATER INTO THE INITIAL THEORY WERE INTELLECTUAL AND COGNITIVE FACTORS, AND TO SOME EXTENT, SOCIOLOGICAL DIMENSIONS. IN EACH OF 4 SCHOOL DISTRICTS, A BATTERY OF QUESTIONNAIRES WAS ADMINISTERED (TO MORE THAN 1,300 PERSONS IN ONE CASE) TO MEMBERS OF THE SCHOOL AND COMMUNITIES INVOLVED. THE QUESTIONNAIRES COVERED SPECIFIC AREAS REQUIRED TO TEST HYPOTHESES DERIVED FROM FIRO THEORY, NAMELY, INTERPERSONAL BEHAVIOR, EDUCATIONAL VALUES, CHILDHOOD BEHAVIOR, DEFENSE MECHANISMS, SOCIOLOGICAL AND BIOGRAPHICAL DATA, INTELLIGENCE AND COGNITIVE STYLE, RATINGS AND OTHER EVALUATIONS OF THE ADMINISTRATORS SERVING AS SUBJECTS. ON THE BASIS OF THIS INFORMATION, A BATTERY OF NEW INSTRUMENTS WAS DEVELOPED TO MEASURE INTERPERSONAL NEEDS AND VALUES, COGNITIVE ORIENTATIONS AND ABILITIES, AND JOB CHARACTERISTICS. THIS WAS USED IN ASSOCIATION WITH THE QUESTIONNAIRE DATA TO DIFFERENTIATE IN A PRELIMINARY WAY THE EFFECTIVE AND INEFFECTIVE ADMINISTRATORS. A FOLLOWUP PROGRAM USING A LARGER POPULATION SCALE WAS RECOMMENDED. (JH)

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PROCEDURES FOR IDENTIFYING PERSONS WITH POTENTIAL FOR PUBLIC SCHOOL ADMINISTRATIVE POSITIONS

An Application and Extension of the FIRO Theory of Interpersonal Behavior

Cooperative Research Project No. 677

by

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University of California
Berkeley, California

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Preface

This is a report of a pilot study. As such it is not complete in itself, but represents the beginning of a larger study. Work on many aspects of this project has proceeded concurrently, since each part interconnects with the rest through a central theoretical framework. Hence, no single segment is completed before the next begins, but rather all are in a constant state of interdependent change.

This report, therefore, constitutes the skeleton of an overall framework on which certain parts are filled in to a much greater degree than others. For some sections, a great deal of work has been done and extensive theoretical and empirical material is presented. For others, the ideas are in their embryonic stage and the data are sketchy. The larger study is designed to provide the material necessary to complete the filling in.

The purpose of the pilot study was to refine and revise the hypotheses, measures, and procedures. Revisions of hypotheses and measures are discussed in the text where appropriate. One methodological experience might be of interest to our colleagues. The exclusive use of the correlational analysis of the large amounts of data we have accumulated seems inadequate. When the data were broken down in detail in an attempt to understand the relations among variables, we found a correlation coefficient to be too much of a summary statistic, and we were frustrated at many points. Our present inclination is to change to the methods of data analysis advocated especially by Lazarsfeld (1955) and Hyman (1955), which make much greater use of the scattergram type of relational analysis and more detailed examination of interdependence among three or more variables.

The extensive scope of this project required broad cooperation from many people. We would like to acknowledge especially the able, and often nocturnal efforts of the research assistants Nancy Watson, Rolf Kroger, Nirmal Mehra, Robert Feinbaum, Marvin Geller, Vernon Allen, William Riess, Toyo Masa-Fuse, Stella Estes, Judith Vollmar, Frank Monsanto and Frank Darknell. This group was given very competent assistance in rostering, calculating, typing and general clerical assistance by Betty Smelser, Pat Ethridge, Ellen Birnbaum, Gretchen Fretter, Ann Stockton, Maryann Mangold, Suzanne Riess, and Joan Halldorson. The job of overseeing this operation, coordinating the efforts of the office staff, and also contributing significantly to the theoretical work could obviously not be done by one person--but it was, Janet Osborn.

In addition to this central staff, educational institutions and organizations in California cooperated in certain aspects of the study. Staten Webster, as associate research director, was responsible for the coordination of these diverse personalities, a job he performed most capably while also making important and original substantive contributions to the project. At San Diego State College, Marvin Platz and William Wetherill; at Long Beach State College, Willard Van Dyke; and at San Francisco State College, Aubrey Haan and George Hallowitz, respectively, assumed the responsibility for administering the test instruments to school district personnel in their immediate vicinity. The California

Commission on Public School Administration gave encouragement and assistance to many aspects of the project.

Testing in the various school districts would not have been possible without the permission of the school boards and the superintendents Burton Tiffany of Chula Vista, Gerald Lance of Huntington Beach, Frederick Lucas of Laguna Salada, and Herbert Wennerberg of Berkeley.

A special debt of gratitude is due the 1300 people who contributed their time and efforts to filling out questionnaires. Their occasional lack of docility was fully justified by the fact that they often sat for a total of ten to twelve hours for a few cups of coffee, some French pastry and the vague assurance that they were somehow contributing to science. To these patient and cooperative souls--the school boards, administrators, teachers, and parents of the pilot school districts--our deepest thanks.

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THE PROBLEM

This study is concerned with the development of systematic, theoretically consistent procedures for identifying persons who have the characteristics potentially required of an effective public school administrator. At present there is available no satisfactory plan for local school systems to use in selecting their principals and superintendents from available personnel, nor for colleges and universities to use in identifying persons who should be encouraged to prepare for such positions. Many administrators are selected by local districts on the basis of teaching ability; some are not competent administrators. Likewise, students taking work in educational administration in colleges and universities are to a great extent "self-selected."

A number of studies relating to this problem have been carried out (for example, Hall and McIntyre, 1957; Graff and Kimbrough, 1956; McIntyre, 1955; Halpin, 1956; Campbell, 1956; Neagley, 1953; Dooher, 1957; Guba and Bidwell, 1957; Hemphill and Griffiths, unpublished; AWK Kellogg Foundation, 1956). For the most part, however, results have been inconclusive and there is little agreement on satisfactory procedures, or even upon characteristics that are important for effective school administration (see Hall and McIntyre, op. cit.). Some studies deal with sociological factors in the community (e.g., Bullock, 1959; Delwood, 1959), others with behavior or with personality attributes of the administrator (e.g., Guba and Bidwell, op. cit.). Little, if any of the work done to date has been based upon a systematic, theoretical approach to school administration.

The goal of this project is to develop more effective selection procedures than are currently available, building these procedures around an evolving theory of school administration and taking into account a number of aspects of the school administration setting including (1) situational (sociological) factors, (2) interpersonal needs (psychological) factors , (3) cognitive abilities and orientations, and (4) life history data. The present report concerns the pilot study, carried out on about 1300 subjects preliminary to more complete testing on a large sample of school systems, and dealing primarily with school principals.

OBJECTIVES

The objectives of the pilot study were threefold: (1) to begin to develop a theory of educational administration as a framework for organizing selection procedures and generating hypotheses about educational administration; (2) to construct instruments that would serve to test the hypotheses so generated; and (3) to administer the instruments to large enough samples of subjects to permit adequate testing of the hypotheses, revision and refinement of the instruments, and exploration of additional factors that might expand or modify the theory.

PROCEDURES

Data relevant to testing all research hypotheses were gathered at the same time, following the same general procedures. A brief description of the overall research approach follows.

The first step in the research was to develop a general theory applicable to school administration and to work out research hypotheses based on the theory. Before hypotheses were crystallized it seemed desirable to talk at some length with as many school administrators as possible in order that purely theoretical notions would have a practical point of reference. This fed into the second major step in procedure - securing the cooperation of school districts from whom pilot data could be obtained. Members of the research staff talked with school and community groups and individuals, explaining the research to them and at the same time modifying the research on the basis of their ideas and suggestions.

When tentative and general hypotheses had been adequately worked out, preliminary versions of instruments required to test them were developed. This again required talking with future subjects about the plausibility of test items and their practical relevance to the schools. Then trial batteries of instruments were administered in the first pilot community.

Both informal reactions and some obvious aspects of the data obtained (for example, limited range of response) suggested that further revision of some instruments would be necessary before the hypotheses could be tested. In addition, a number of the trial instruments were Guttman scaled. Work began with the University of California Computer Center to develop an IBM-704 program for Guttman scaling. This was a lengthy process, and when completed it was found that a number of item sets did not form scales. Thus, further revision was necessary before these particular scales could be used in hypothesis-testing.

In the meantime the cooperation of additional pilot communities had been secured, and a number of revised test batteries had been administered to them. With more data coming in, further revisions were suggested and again the new versions were administered to other groups.

With enough data available from revised instruments, preliminary tests of the research hypotheses could be made. Hypothesis testing suggested further refinements and additions to the theory and hypotheses as well as the instruments.

These various steps in the procedure - theory revision, securing community cooperation, hypothesis testing, instrument construction and revision, and further theory modification - continued simultaneously throughout the period of the pilot study. With this in mind, some details of procedure can be discussed.

Subjects

Subjects who were given all or parts of the pilot battery of instruments were members of four California school communities: Berkeley (Berkeley Unified School District); San Diego (Chula Vista Elementary School District); Pacifica (Laguna Salada Union Elementary School District); and Huntington Beach (Huntington Beach High School District).

Berkeley was used most extensively in working out the pilot test battery. Work in the other communities began later, providing an opportunity to secure data on revised instruments as well as adding data from various types of school communities, thus increasing the generality of results.

The Berkeley school district is located in a university community of extremely heterogeneous population racially, socio-economically, and politically. The Chula Vista district contributes elementary schools from a similarly heterogeneous community, but one without a university and with a large farming element. The Laguna Salada district is in a primarily lower-middle and lower class community, while the Huntington Beach schools are in a stable, upper-middle class community. Thus, the pilot communities together represent a fair amount of social diversity.

Ideally, all subjects were administered all tests in the pilot battery. Actually, somewhat less than half completed the battery. Further, as mentioned above, different pilot communities participated at different points of instrument development, so that not all subjects took exactly the same battery of instruments. Thus, the number of subjects available for testing the hypotheses varies from one hypothesis to another. Table 1 indicates numbers of subjects who took at least one of the tests in the battery. Numbers used for each statistical test will be mentioned when the analysis of data is discussed.

Table 1

Subjects from Pilot Communities

	Berkeley	Huntington Beach	Chula Vista	Laguna Salada	Total
School board members	2	5	-	4	11
Superintendents	1	1	-	1	3
Central district staff (assistant superintendents, counselors, supervisors)	31	1	-	1	33
Nonprofessional school staff (secretaries, cafeteria workers, custodians, etc.)	30	-	-	-	30
Principals	22	2	16	7	47
Vice-principals	6	-	-	2	8
Teachers	238	81	333	112	764
Parents	192	7	153	-	352
Community leaders	77	2	-	-	79
Total	599	99	502	127	1327

The procedure for obtaining subjects varied somewhat from one community to another. In all communities, some time was spent initially providing the school community with information about the study and gaining the official endorsement of such groups as the school board, PTA groups, and teacher organizations.

In Berkeley, the next step was to send out individual letters to the following people, requesting their participation: (1) all school board members; (2) all administrators and district staff; (3) all teachers; (4) all school secretaries and other non-credentialed local school staff members; (5) a random sample of PTA members comprising about 8% of total PTA membership; (6) a selected group of community members influential in the schools, picked from lists maintained by the school system together with several month's perusal of the local newspaper. Included in this group were all PTA presidents.

Of the people to whom letters were sent, the following percentages actually participated in the study: major administrators (superintendent and principals), 100%; minor administrators (assistant superintendents, vice-principals, supervisors, central staff), 91%; teachers, 39%; other school staff members, 14%; PTA members, 30%; community leaders, 31%.

The distribution of parents and teachers who participated initially in Berkeley was mapped geographically, and additional subjects were asked personally and through parent and teacher groups to cooperate in order to round out the distribution of subjects by school and socio-economic status. In addition, subjects who began the battery but dropped out before completion were followed up by letter and telephone and urged to complete the questionnaires.

The procedure in Huntington Beach and Laguna Salada was similar but somewhat less intensive. In Chula Vista, concentration was on enlisting the cooperation of groups rather than individual volunteers, so that if a teacher organization agreed to cooperate all its members participated. This last procedure probably provides a more representative sample and will be used in the statewide study contemplated next, since the approach used in the other areas retains only the most cooperative and, perhaps, "university-minded" volunteers.

In addition to the subjects of the study described above, several student groups were used in reliability and validity studies of the instruments. These included students from the University of California, Berkeley, Harvard University, San Francisco State College, Long Beach State College, University of the Pacific, Fresno State College, and Claremont Graduate School, through the cooperation of faculty members at these institutions. These subjects were not used in hypothesis testing, but only in developing the instruments.

Testing Procedures

Except for the intelligence test, which had to be timed, all instruments were designed to be self-administering with no time limits. Thus, there was considerable flexibility in testing procedure, and different methods were used in different communities.

In all communities several precautions were taken to insure anonymity of results, since several potential subjects were quite concerned that someone in the school system might find out "how well I do," "what I said about the principal," etc. First, code numbers were assigned to each subject, meaningful only to project staff members. The numbers consist of two letters and five digits indicating the community, position (principal, teacher, etc.) of the respondent, with what school the respondent is connected, and sex. Thus, the code numbers tell staff members all they need to know about the subject without identifying him personally. Further, they are meaningless to anyone else who might see the data. In order that individual subjects requesting an interpretation of their scores can be identified, a locked card file is kept in which subjects' names are matched to their code numbers. However, primary subject records, indicating what tests have been completed, are maintained on McBee punch cards identified only by code number for staff use in analyzing data.

A second precaution was taken in providing separate answer sheets for each test, kept apart from the test booklets themselves. Answers consist only of numbers which convey no meaning to anyone unfamiliar with the tests.

With the coding procedure in common, the various methods of administering tests in the four communities follow.

Berkeley. In Berkeley, three weeks, spaced about a month apart, were devoted to group testing sessions. Each of the weeks consisted of five evening sessions, one or two afternoon sessions, and a Saturday morning session. One of the local school cafeterias or auditoriums was used for each session. For each of the weeks, subjects were sent notices well ahead of time and asked to pick one of the sessions for that week, returning a postcard indicating their choice. Packets of tests were then made up for each subject, with his code number written on the answer sheets and his name only on the outside of the envelope containing them.

At each session the subject was given his packet when he arrived, and allowed to work at his own speed until he finished the tests. (The one exception was the final (third) testing when the intelligence test was administered to each group at the beginning of the session.) Several staff members circulated among the subjects to answer questions and to insure that the tests were being filled in properly. After about an hour and a half refreshments were served and subjects were encouraged to take a ten-minute break. Each subject was allowed to leave as soon as he had finished the tests in his packet. Each answer sheet was checked for completeness before the subject left. Depending on the speed with which invididuals worked, each session required from 1½ to 3½ hours.

After the third week of testing, persons who had begun the battery but failed to complete it were mailed the questionnaires they had not finished with a request to complete them and return them to the project office.

Chula Vista. A similar procedure was followed in Chula Vista, with one important variation. Instead of asking subjects to come on their own time, cooperation of principals was enlisted in allowing experimenters to use regular teachers' meetings for the administration of questionnaires. As mentioned above, this approach provides a more representative sample than the Berkeley approach. It also has the advantage of requiring less of the subjects' leisure time and contributes to more willing cooperation.

Huntington Beach and Laguna Salada. In Huntington Beach and Laguna Salada, precoded questionnaires were mailed to subjects to be filled out in their spare time. In Huntington Beach, subjects were asked to come to a final group session for the intelligence test; in Laguna Salada the intelligence test was not given. Administration by mail has the advantages of being simpler for staff members and of not requiring the subject to come to a special place. However, it leaves much more to the subjects' individual initiative and does not provide the esprit de corps of group testing. As a result, only the most conscientious of subjects can be counted on to complete the battery. Hence, this method probably provides the least representative sample and the lowest percentage return of those employed. Further, it provides no means for answering on-the-spot questions nor for checking to insure that tests are filled out completely. All things considered, it appears to be the least satisfactory of the methods used.

THEORY

This research assumes that not only the personal characteristics but also the personal interactions of the administrator in his school community must be studied if administrative behavior is to be understood sufficiently to be predictively useful. It is not enough to know of a potential administrator, for example, that he is an intelligent, authoritarian extravert from a middle class family; in order to predict his success as an administrator we must know these things plus something about the school system and community in which he works and the ways in which he relates to his staff and community members.

On the basis of this assumption, the FIRO theory (Schutz, 1958) originally derived primarily to explain and organize interpersonal behavior has been revised, expanded, and adapted to the administrative situation. In its adaptation to the present research, the theory deals with cognitive, sociological, value, present and past interpersonal variables for the school administrator and the people with whom he works--other administrators, teachers, non-certified staff personnel, school board members, community leaders, parents, and pupils. For a full explication of the general theory see Schutz (op. cit.). A brief description follows.

FIRO theory states that most of an individual's interpersonal behavior is determined by his needs in three interpersonal areas called *inclusion*, *control*, and *affection*. These dimensions can each be considered at both the *behavior* and the *feeling* levels, and in terms of whether the behavior or feeling is *expressed* or *wanted*. "Expressed" refers to behavior or feelings an individual initiates toward others, while "wanted" refers to behavior or feelings he wants others to express toward him. These dimensions give rise to 12 basic variables, represented by the cells in Table 2.

Table 2

Variables of The FIRO Theory

	Behavior	Feelings
Expressed inclusion	I make efforts to include other people in my activities and to get them to include me in theirs. I try to belong, to join social groups, to be with people as much as possible.	Other people are important to me. I have a high regard for people as people, and am very much interested in them.
Wanted inclusion	I want other people to include me in their activities and to invite me to belong, even if I do not make an effort to be included.	I want others to have a high regard me for as a person. I want them to consider me important and interesting just because I am who I am, regardless of my particular abilities and characteristics.
Expressed control	I try to exert control and influence over others. I take charge of things and tell other people what to do.	I see other people as strong and competent. I trust and rely on their abilities.
Wanted control	I want others to control and influence me. I want other people to tell me what to do.	I want other people to feel that I'm a strong, competent, influential person, and to trust and respect my capabilities.
Expressed affection	I make efforts to become close to people. I express friendly and affectionate feelings, and try to be personal and intimate.	I feel people are likeable or lovable.
Wanted affection	I want others to express friendly and affectionate feelings toward me, and to try to become close to me.	I want people to feel that I'm a likeable or lovable person who is very warm and affectionate.

FIRO POSTULATES AND DERIVED HYPOTHESES

In this and following sections the postulates of the FIRO theory are presented, along with their adaptations to the educational administration context, and the theoretical elaborations and extensions required to meet the problems presented by this empirical investigation. Then each hypothesis is stated, followed by the empirical results obtained in the pilot study.

COMPATIBILITY

This aspect of the research investigates the effectiveness of an administrator as a function of the interaction between himself and those people with whom he has contact in the school situation. This requires knowledge of three aspects of the situation: the administrator, the interactor (person with whom the administrator interacts), and the relation between them.

The administrator and his interactor can be studied in terms of a number of dimensions, dealing with personal, interpersonal, intellectual and sociological factors. The relation between these two people can be considered in terms of (1) how similar they are to one another, and (2) in what respects they differ from one another (or are complementary). The FIRO postulate of compatibility concerns these aspects of the situation. As adapted to the present context it asserts:

> The compatibility of an administrator and his interactor is positively correlated with the interactor's rating of the administrator's effectiveness.

To test the hypothesis, similarities and differences between the administrator and his interactors are explored and related to measures of the administrator's effectiveness.

Compatibility with respect to defense mechanisms, educational values, cognitive style, and intelligence is explicated in terms of similarity. It is predicted that the more similar the administrator is to each interactor on these characteristics, the higher will be the effectiveness rating the interactor gives the administrator.

In the case of interpersonal characteristics, compatibility is explored more extensively, using the various formulations of the FIRO framework and taking into account both similarity and difference. Included here are (1) reciprocal compatibility which measures the degree of mutual need satisfaction; (2) originator compatibility, dealing with the agreement between the initiator and the receiver of behavior; and (3) interchange compatibility, which considers the atmosphere in which people prefer to interact. These various kinds of compatibility will be defined more precisely in the presentation of results.

In addition to compatibility, the concept of effectiveness is an important part of the hypothesis. As in most studies of this type, the criterion problem is a staggering one. Because it is so central and so crucial to the present study, the question of administrative effectiveness will be considered in detail at this point.

Criteria of Administrative Effectiveness

How can effective administration be measured? The approach taken here is applicable to any administrative situation, although the role being considered is the public school administrator, specifically, the principal and the superintendent.

This discussion is intended to be exhaustive, considering most, if not all, of the widely used criteria of administrative effectiveness. When substantive decisions must be made--for example in determining the aims of democratic education or the functions of administration--they are usually based upon standard practice. Where this is not feasible, decisions are based on the present project's evaluation of the available evidence. With this general understanding, the presentation is made in declarative form without the necessity for qualifying each assertion.

From the extensive analysis presented here, an attempt is made to evolve an integrated concept of administrative effectiveness. In the following section various issues related to administrative effectiveness are discussed and this project's approach to the issues is presented. The next section includes a more detailed discussion of the issues together with methods of measurement.

Issues in Assessing Administrative Effectiveness

Number of Criteria. Investigators into criteria of effectiveness often seek the single best criterion. Examination of the various administrative situations suggests that this search may be fruitless. In some cases it is important for an administrator to be the educational leader; in other circumstances the primary requisite is the ability to persuade the community to vote for school bonds; at yet other times he must be able to supervise an extensive building program. Experience indicates that some men may be adept at some of these functions but not at others; thus, to call any one ability "the" criterion seems to lose a significant differentiation. It would appear more useful to describe and measure several criteria for administrative effectiveness, and then to determine which criteria are most important for each situational requirement. The research task is to investigate the main criteria used by or useful to those interested in administrative selection.

The Hierarchy of Functions. The goals of administration are unique in their remoteness. A scientist's goal is a specific scientific achievement, a basevall player's goal is to get a hit, a plumber's is to fix a sink. For these occupations the goal is accomplished primarily by the direct application of one man's skills. Not so an administrator. He must create conditions that result in a number of people functioning in such a way that an organizational goal is accomplished (Barnard, 1938).

This difference leads to a special difficulty in assessing an administrator's effectiveness. A ball player either hits or doesn't, a plumber fixes the sink or not. By and large their success depends entirely upon themselves. But an administrator's success depends upon many factors other than himself and his abilities. An industrial executive is successful if his firm shows a profit; a baseball manager if his team wins; a president if his country stays out of war and depression; a principal if all his students realize their full potential year after year. The special difficulty arises because these goals of the administrator depend on so many outside factors. The company's profit is a function of the state of the economy, the international situation, the competition, the amount of available capital, the public reputation of the company's product, and so forth. The baseball team's success depends on the quality of players, the willingness of the front office to spend money for needed players or coaches, the support of the fans, the history of baseball in the town, etc. The achievement of the student depends upon the help given him at home, his native ability, the economic condition of the community, the intellectual tradition and educational level of the parents, and so forth. All these are factors over which the administrator his limited or no control.

Although this distinction between the accomplishment of the administrator and other occupations is somewhat overdrawn, nevertheless accomplishment of the ultimate goal of an administrator is not as accurate a measure of his effectiveness as it is for many other occupations. To arrive at a better measure of administrative effectiveness it is useful to examine administrative sub-goals. For example, the principal's ability to motivate the community to support the schools is probably relevant to the accomplishment of his ultimate educational aims. The sub-goal as a measure of administrative effectiveness has the advantage of resulting directly from the administrator's actions and the disadvantage of having only an inferential relation to the ultimate goal. That is, it is not certain that schools in communities with well-motivated citizens will produce students who realize their potential, but it is assumed that this result is highly probable.

Thus, both administrative results and administrator performance may be used to measure administrator success. He may be assessed on whether or not his students achieve up to their potential, or on his method of making decisions. In the present project results are considered of greater importance, but performance is usually easier to measure and easier to attribute directly to the administrator. Hence, both will be measured. Although results are considered more important, the administrator will be held less accountable for them than for performance. These two aspects will be considered below in more detail.

Delegation and the Leader as Completer. The above considerations are related to the issue of delegation. How shall the work done by an administrator's subordinates be evaluated? Should the administrator be evaluated in terms of his own behavior, or in terms of what is accomplished by his school regardless of who does it?

The concept of leadership that seems most satisfactory to the present investigators is that of "the leader as completer" (Schutz, 1961). This concept does not specify any set of behaviors as desirable or defining for leadership. Rather, it focusses on leadership as the ability to insure that a group accomplishes its goal. Leadership functions are concerned with the total group operation, and assuring that all the specific functions necessary to accomplishing the goals of the group are being performed optimally. The role of leader, or administrator, requires (1) knowledge of necessary group functions, (2) sensitivity in perceiving which group functions are not being performed optimally at a given time, (3) ability to fulfill or have someone else fulfill that need optimally, and (4) willingness to do what is necessary to satisfy these needs even though personally displeasing.

This concept strongly favors the view that an administrator should be judged by the results of his organization's performance regardless of which functions he performs and which he delegates. An administrator is therefore considered effective if he recognizes his own abilities and limitations and compensates for his limitations by delegating well. Delegation becomes one of his primary tools for accomplishing the goals of the organization (Dewey, 1958, pp. 58-60).

Accountability for Results. A school administrator and his staff usually contribute considerably to accomplishing the goals of a school, but there are often other contributing factors as well. For example, community members may cooperate with the schools not only because the principal motivates them well, but also because they want their schools to be good regardless of the principal. Also, the principal is limited by factors outside his control, such as inherited problems, and inherited staff.

To evaluate any administrator fairly, it is necessary to compare his performance with the realities of the total situation. If he is placed in a position where it is relatively difficult to accomplish school objectives, he should receive more credit for success than if he is put into a relatively simple position. In other words, a full assessment of administrative effectiveness should include a measure of how accountable the administrator is for the events that occur in his school situation.

Accountability is assessed by measuring the difficulty of the job. It should take account of what would have happened had an "average" or "the best possible" administrator been on the job.

Frames of Reference. The multiplicity of criteria of effectiveness was considered above in terms of the many functions on which administrators may be judged. In addition, each function may be perceived from several different points of view and by a variety of people (Coladarci, 1956; Hollander, 1961). For example, a superintendent may be rated very high on administrative skill by the school board, but very low by teachers. It does not seem meaningful to look for which is "really" true. All perceptions are true in the sense that they *are* reported as seen by some person or group. Whether or not each perception is supported by additional evidence, the perception itself is often an important consideration with respect to effectiveness. If a community perceives the administrator as inept, they may vote against a tax increase regardless of whether or not he is "really" inept. Perceptions are realities that must be taken into account.

Further, it is quite possible that two different perceptions of the administrator might both be supported by more objective evidence. For example, a principal may be very submissive when dealing with the superintendent and very domineering with teachers, leading to two contradictory but accurate descriptions of his dominance behavior by two different perceivers. Since each of these perceivers observes different facets of the administrator's behavior, it would not be especially useful to expect high inter-rater agreement among perceptions of the various groups. A principal could reasonably be expected to exhibit different behavior when he is discussing a budgetary problem with the superintendent than he does when socializing with a community leader, disciplining a student, or supervising a teacher. These different behaviors may or may not affect each interactor in the same way. (A possible basis for the difference in his behavior may be found in his experiences with significant childhood figures, discussed under the hypothesis of relational continuity dealing with the origins of administrative behavior.)

It seems, therefore, that measures of effectiveness should specify not only the area of effectiveness being considered (educational leadership, fund raising, etc.), but also the point of view from which this evaluation is made (i.e., the person or group making the evaluation). (Halpin 1960)

A complete statement of an effectiveness rating would now take the following form:

"Administrator A is rated X relative to the best possible performance on function C by person (or group) P"

The most comprehensive evaluation of an administrator's total behavior includes the perceptions of all persons in a position to observe significant administrative behavior. Such persons will be called the administrator's interactors. The interactors of school principals include teachers, parents, superintendents, school board members, community leaders, local building employees (secretaries, custodians, gardeners), students, other principals, supervisors, and central office administrators. In most cases these interactors have an opportunity to observe some part of the principal's behavior, although the opportunity is limited for many, and some members of these interactor groups (inactive parents, for example) have virtually no opportunity to observe.

There remains a serious limitation to this method of assessment. A satisfactory rating from all the above interactors may simply mean that the principal is performing satisfactorily. But what assurance is there that he is doing a good job by some more "objective" or "absolute" standard? Certainly, it is undesirable to limit this research project to maintaining the status quo, or at best to raising all administrators to the level of the best existing ones.

One solution to this dilemma is to add another point of reference for the ratings contemplated. This new rating would compare the performance of a given administrator with some absolute criterion of administrative excellence. This rating could probably be made best by those people most acquainted with the absolute criteria, professors of educational administration. They could rate administrators on the basis of how closely they approximate the "ideal" administrator. This would constitute a criterion allowing a research project to recommend administrators who might exceed the status quo. All administrators could theoretically be rated lower than the ideal, even if judged to be the best administrators available.

A second approach is to discover or devise criteria that could be agreed upon as ultimate for the determination of an able administrator. This is perhaps not so unattainable as it may seem. If we consider the aims of education, it may be agreed that the sole ultimate function of an administrator is to carry out, in the most effective way possible, the objectives of education. These objectives are often stated in terms of the impact of education on the child, the community, and society as a whole. Since the latter two effects are more difficult to assess, it may be possible to confine our investigation to the impact on the child. Does the administrator create conditions in which children in his school achieve, to the maximum of their ability, the aims of education; and do they continue to do this through the years, after they leave school?

Values and Choice of Criteria. The decision as to which criterion of effectiveness is most relevant to a specific case must be made by policy-makers rather than research workers. It is at this point of decision that the issue of values arises. Each school board or selection committee has not only the prerogative but also the obligation to select its own criteria of effectiveness. It is up to the selection group to decide what they want in an administrator: a good public relations man, an educational leader, someone who knows about building design, a good disciplinarian, or whatever.

The function of research is to provide reliable data from which these criteria can be obtained. If a board wants a man who will, for example, relate well to the teachers, research results should provide the information necessary to maximize the probability that the board will select, from among available candidates, the man most likely to achieve this goal.

A researcher may be of additional assistance by demonstrating that two of the board's criteria for its administrative candidates are in conflict. To take a hypothetical example, if the board asks for an administrator who will develop autonomous individuals among the students, and who will run a sound, traditional 3R school, it may be possible for a researcher to show that these two goals are generally in conflict--therefore that the board's requirements of the administrator are unrealistic and should be reconsidered.

If the researcher feels that selection groups should always value a particular criterion more than others, he has every right to try to influence boards to this end. However, in his role as researcher this influence is limited to presenting evidence that if a particular criterion is used certain other desirable results occur. If he wishes to go beyond such influence he is, of course, free to do so, but he is then leaving his research role.

Summary of Issues. The measurement of administrative effectiveness should take into account the following considerations:

(1) There are various criteria of administrative effectiveness, not just one. These criteria include both the results of administrative behavior and the administrator's performance itself.

(2) The administrator's job is to assure effective operation of his organization, which means recognizing and dealing completely with all functions of his group.

(3) Accomplishing goals of the group is more important than the specific behavior used to reach the goals. Whether he does something himself or delegates it is irrelevant to evaluating an administrator's performance. The important thing is how well the job is done.

(4) However, his administrative performance should also be measured, even though it is not as direct a measure of his effectiveness as is the accomplishment of school goals, since he is more directly accountable for the former and it is usually easier to assess.

(5) How accountable the administrator is for the performance of his school must be considered in evaluating his performance. Handling difficult situations effectively should be given more weight than handling simple situations.

(6) Each function of an administrator can be evaluated from many frames of reference, that is, by many different observers. Each of these observers is important and should be included in the criterion measure.

(7) Selection of criteria of effectiveness in any particular situation is a question of the values of the policy makers, the school board or selection committee. The research problem is to provide reliable data for making the selection decision.

(8) A complete statement of an administrative evaluation takes the form:

"Administrator A is rated E, relative to the best possible performance on criterion (goal, performance) C by person (or group) P in situation S."

This project is concerned with the variables C, E and P--the criteria, ratings of effectiveness, and raters. The raters (the administrator's interactors) were enumerated above. The following sections are devoted to a discussion of specific criteria of administrative effectiveness (the functions of administration), and measurement of administrative performance (effectiveness).

Functions of the Administrator

The literature on administration and leadership is replete with lists of functions and different concepts of the leadership role. It is necessary to select from among the various approaches in order to provide a framework for the present study. As mentioned above, the approach used here is that of the "leader as completer" as described by Schutz (1961), which employs the FIRO theory of interpersonal behavior as a basis for describing a comprehensive list of functions of a leader. These derive from the assumption that a group has certain functions that must be fulfilled if it is to operate effectively, and that the role of the leader or administrator requires keeping these functions operating effectively.

In considering the school administrator's functions, it is necessary to explore the general aims of education and the role of the school in achieving them. This provides a framework for describing the results the administrator is expected to accomplish, on the assumption that all his efforts are aimed ultimately at attaining the goals of democratic public education.

Aims of Education. The concept of education underlying this project's selection of effectiveness criteria can be outlined as follows:

A. A democracy's aim is to provide a form of government that will lead to the greatest amount of satisfaction and productivity for the greatest number.

B. It is based on the principle that using the abilities of all its citizens will lead to this goal most effectively.

C. It emphasizes the ability and the right of each citizen to be free to determine his own destiny and be responsible for himself to the maximum degree possible without outside interference.

D. Public education is aimed at the accomplishment of these goals.

E. Therefore, the educational system should strive to produce citizens who realize their potential as fully as possible. All the abilities to think, to know, to do, and to create should be developed to the utmost (Counts, 1953; Dewey, 1916).

F. The school will achieve these general goals if, in the long run, it produces students who work up to their potential in the following areas, which define more specific educational goals:

1. Academic achievement. Each student within the jurisdiction of the administrator learns how to think creatively, logically and independently to the limit of his capacity, acquires as much useful, realistic knowledge of the world and himself as he is able, and acquires and develops as many useful skills as his capabilities permit.

The degree to which this goal is accomplished is often measured by standardized achievement tests. In order to estimate the potential of the student, this score is usually compared with a measure of "native intelligence," typically an IQ test. This comparison probably offers the best estimate available at this time.

2. Emotional adjustment. Each student within the jurisdiction of the administrator develops a stable, unconstricted, well developed personality such that he is not blocked in realizing and utilizing his abilities. His emotional life is rich and satisfying, he is capable of giving and taking love and understanding. He has a realistic knowledge of himself, and he can accept, be comfortable, and like himself with his own strengths and weaknesses.

Problems of measurement in this area are prohibitive. As yet there are available no satisfactory measures of degree of adjustment except for extreme behavior disorders and pathology. Probably the most reliable estimate would come from guidance and counseling personnel who have the best opportunity to observe the students and frequently are somewhat better trained to observe adjustment than other observers.

3. Social adjustment. Each child within the jurisdiction of the administrator is capable of coping effectively and living happily in the present-day world.

This, again, is a most difficult characteristic to assess. However, there are indicators of anti-social behavior which may be considered as one symptom of lack of social adjustment, such as juvenile delinquency, truancy, and discipline records. On the positive side are indicators such as holding jobs successfully during vacation periods, and acceptance by fellow students (Pylinger and Grace, 1953).

4. Physical health. Each child within the jurisdiction of the administrator achieves the maximum physical condition allowed by his constitution. He is in good physical condition through adequate exercise and diet, and as free from disease and injury as possible.

Measurement in this area is more straightforward. From school medical records an evaluation can be made of the present state of health and of the trends toward health or illness during the administrator's tenure.

Although these four goals are extremely important ones, problems of measurement make them very difficult to use for the evaluation of administrative effectiveness. This is especially true when it is necessary to obtain data from a large number of schools. Testing and record keeping vary so greatly from school to school that obtaining reliable information for sizeable number of schools might not be possible. However, various events that have a high probability of leading to these goals are often easier to measure and may provide insight into how well the ultimate goal has been accomplished.

Utilization of Resources. The above goals will be best accomplished when all the human resources associated with the schools are utilized. This is similar to Barnard's (1938) concept of "efficiency."

The resources available to the schools include four major groups, each of which makes a particular contribution: (a) Community, including parents and other citizens. They must cooperate with the school in every reasonable way that can be worked out collaboratively between school and community personnel, taking account of the needs and desires of each. (b) Teachers, including supervisors and consultants, must be of the highest caliber available and teaching to the best of their ability. (c) Facilitating staff, including school board, administrators, business manager, custodians, secretaries, lunch room workers, gardeners, other administrators, nurses, etc., who must help to create an environment within which the best learning takes place, including maintaining an adequate physical plant, obtaining financial support, following administrative procedures that facilitate, contributing to the health of the students, etc. (d) Students, who must do their best to learn up to their capacities (Campbell, 1957).

In order to accomplish these goals, three factors must be mobilized: motivation, ability and opportunity. The administrator must create conditions under which the community is motivated to cooperate with the schools, the teachers want to teach up to their capacities, the staff is motivated to develop the most helpful and effective facilitating services, and the students are inspired to learn up to their capacities.

Motivation alone is not sufficient, however. Once motivated, these groups must have enough guidance to know what to do and how to do it if the goals for which they are motivated are to be accomplished most effectively. Community members must be helped to understand the goals and needs of the school and the contribution they can make to their achievement. The teachers must have access to the latest teaching methods and training courses so that they may grow in ability and experience. The staff must have access to the most effective methods of giving supporting service such as maintaining the physical plant, communication procedures, accounting methods, etc. The students must be taught how to learn, how to study, how to read, and other techniques that will lead to better learning.

Even if a person wants to do something and knows how, he must have the opportunity to do it. Hence, the administrator must create opportunity for these goals to be accomplished. The citizens must be allowed to cooperate and contribute to the schools, through invitations or responses to his offers. The teacher must be allowed to teach, and all distractions such as extensive extracurricular responsibilities, restrictions on teaching methods, pressures from parents, etc. must be minimized. The staff must not be hamstrung by rigid regulations or excessive supervision. The students must be given the opportunity to learn, through reasonable class size, non-constricting teaching, and a minimum of distractions.

Finally, personnel reated to the schools have the right to obtain personal satisfaction from the schools. This is an obligation of every social institution. Society presumably profits in the long run from educated children, but it is also important that citizens, teachers, staff, and students enjoy the school experience itself. If this were not an obligation of school institutions, we might have a society in which everything is frightfully efficient but people are miserable. It is true that people will probably be more efficient when they are happy, but in addition it is simply an important goal of society for people to be happy (Argyris, 1957).

Therefore, the administrator should create conditions that are personally gratifying to citizens, teachers, staff and students. If they conflict, the educational goals should be given precedence, but both are essential.

Table 3 summarizes the administrative functions discussed above. They will be considered in more detail in the following sections.

Table 3

Mobilization of Resources to Accomplish School Goals

Group	Goal for School	Motivation	Ability	Opportunity	Gratification
Community	Cooperation with school	Want to cooperate	Know how to help	Be allowed to help	School is a source of personal gratification in terms of personal recognition, meaningfulness, accomplishment, and personal pleasure.
Facilitating staff	Facilitation of teaching-learning activities	Want to aid teach-learn process	Know how to facilitate	Opportunity to facilitate	
Teaching staff	Best teaching possible	Want to teach well	Know how to teach well	Conditions helpful to teaching	
Students	Best learning possible	Want to learn up to capacity	Know how to learn	Be allowed to learn well	

The community. The primary objective of the administrator with regard to members of the community is to elicit their cooperation. Community cooperation means that all community members living in the area within the jurisdiction of the administrator help their schools, to the reasonable limit of their time and ability, in accomplishing the goals of the school. This includes passing necessary bonds and taxes, serving on school citizens' committees, aiding the children by helping with homework, establishing supplementary classes, etc. (National Society for the Study of Education, 1954).

There are two approaches to assessing the administrator's success in eliciting this cooperation. More or less objective indicators may be obtained by studying records of school bond and tax elections, participation on citizens' committees, PTA activity, and other similar indicators. Secondly, community attitudes toward cooperation with the schools can be surveyed. This method is limited in that using such information to infer actual cooperation requires assuming that positive attitudes lead to constructive action. This assumption seems sufficiently tenable, however, to suggest pursuing this method of assessment further.

Since the school's success depends upon financial support from the community, cooperation from parents, etc., it is important for a school to maintain satisfactory relations with the community. The administrator is effective in this area to the extent that good community relations are maintained (Anderson, 1952).

In order to achieve optimal cooperation between the school and the community (indeed, between the school and any other group), the three things mentioned above must be accomplished, namely:

(1) Motivating community members to cooperate with the school, including convincing them that (a) schools are worth an expenditure of energy, and (b) cooperation leads to personal gratification for community members.

(2) Communicating to community members knowledge of what they can do to aid the school.

(3) Allowing them an opportunity to cooperate.

There are three areas of relationship in which the community member (or teacher, facilitator, student) has feelings about the school, in which he may have the ability and opportunity to cooperate, and from which he may derive personal gratification (see Schutz, 1958). These areas include the importance of the school and its personnel, the competence of the school and its personnel, and the likeability of the school and its personnel.

Importance. One significant administrator function is to insure that the community appreciates the importance and significance of the school in community life. Since the schools will not be the most important aspect of the community to every citizen, in terms of his own hierarchy of values, the job of the administrator is to present the school's case in such a way as to avoid overselling as well as underselling.

A citizen's feeling of the school's importance will influence the way he behaves toward the school. A community member's feeling that the school is of some importance will often result in his willingness to devote an appropriate amount of his time and energy to school affairs. It is then the administrator's function to work out with each citizen a realistic amount of time and energy to devote to the school, taking account of the importance of the schools to the citizen in his entire life hierarchy of values, the needs of the school that can be met by citizen participation, and the rewards to the citizen for devoting time.

If the importance of the school is undervalued by the community, the administrator will not have as much time available from the citizens as he could use. If the importance is overvalued, then the school will get more help than it can use, running the danger of disappointing and disillusioning those who later find that they have neglected other important aspects of their lives (for example, overactive parents who neglect their children).

After the time allocation has been worked out, it is, of course, important that the administrator allow an opportunity for the citizens to cooperate. This involves invitations, accepting citizen initiative, and general alertness to the timing of needs for community cooperation so that this cooperation may be maximally utilized.

Personal gratification for the community member comes through the recognition he receives for contributing to school activities. Just how rewarding such recognition is for a particular citizen depends upon his own need for it, and upon how much recognition is actually given to someone who devotes time to the schools.

Thus, to achieve optimally in the area of the school's importance for the community, the administrator should:

(1) See to it that the community members have a realistic picture of the actual importance and significance of the school in community life;

(2) Work out with each community member the amount of time he can devote to cooperating with the schools in terms of the importance of the schools and his own hierarchy of values;

(3) Allow an opportunity for each community member to devote the amount of time to the schools he is willing to;

(4) Grant personal recognition for such cooperation.

The degree to which the administrator achieves these functions may be measured by items like those in Table 5 at the end of this section.

Competence. Community cooperation depends greatly upon respect for the competence with which the schools do their job, as well as community recognition of the school's importance. The administrator's function in this area of the school's competence is to maximize the community's feeling of respect for the competence of the job being done by the school in educating children, actually merited by the school's performance. Then he must attempt to convert this confidence into sharing responsibility for running the schools.

The administrator must bring about a realistic cooperative plan for running the schools based on the educational and professional competence of the school staff and the experience and special abilities of the community. In other words, the ideal relation between school and community results in the accomplishment of school policy and practice through the cooperation and integration of the best abilities available from both the school and the community.

Allowing the community too much influence in school policy leads to control of the curriculum by unqualified people, restriction of academic freedom of the teachers, and a loss of staff ability to influence the curriculum. On the other hand, failure to allow the community sufficient influence leads to lack of cooperation in running schools, in helping students with homework, in establishing special programs outside school hours, in passing school taxes and bonds, etc. Such lack of cooperation also results from an unrealistically high evaluation of the ability of school personnel, leading to the assumption that they require no assistance.

Again, the administrator must provide ample opportunity for citizens to take on an appropriate amount of responsibility. For example, if a citizens' committee is appointed, it must then be given an opportunity to function and its recommendations taken into account.

Personal gratification for community members for sharing responsibility for school functioning comes from a feeling of accomplishment and recognition of their competence. For example, for many people there is reward in being selected on a citizens' committee, having it publicized in the local newspaper, and having the community know that their advice has been solicited.

In this area of competence the administrator does an optimal job to the extent that he:

(1) Creates in community members a realistic respect for the competence of the schools and their personnel in accomplishing the educational goals;

(2) Works out with each community member the amount of responsibility it is appropriate for him to assume in making decisions regarding the schools;

(3) Allows an opportunity for each community member to take on his appropriate amount of responsibility;

(4) Gives recognition for accomplishment and effectiveness.

Items that may be used to assess the administrator's success in this area are given in Table 5 at the end of this section.

Affection. Even though a citizen may recognize and respect the schools, for various reasons he may not have much feeling of personal involvement with them. This could impair his willingness to participate in school activities. The administrator's function in this area is to maximize the community's liking and feeling of warmth and friendliness toward the school. Then he must see to it that this feeling of liking is translated behaviorally into support of school functions and school personnel.

The feeling of liking has as its behavioral correlate the general support for and feeling of identification with the school and its personnel. The administrator's role is to establish and maintain relations with citizens in such a way that the personal needs and desires of both school and community members are taken into account, and that school-community relations are carried out with these considerations in mind. These relations involve the feelings of school personnel for each other, of parents about their children and their children's welfare, pride in the school as a part of the community, etc.

Failure to elicit sufficient liking can lead to personal rejection and subsequent lack of personal gratification for staff, lack of community enthusiasm for school activities, and general lack of support. Too much liking by community members can result in interference with objective decision making through the influence of personal feelings. If community members become too involved with school personnel, it becomes more difficult to treat them equally in such matters as special consideration for their children, awarding contracts, etc.

To give the community an opportunity to like the school and its personnel, the administrator must be accessible to the community so that community members can come to know the school and its personnel well.

Community members derive personal gratification in this area through the rewards of close, personal relations, acceptance and affection, and the feeling of being "nice people." The actual relations formed with school personnel are in themselves rewarding.

Thus, in the area of affection the administrator does an optimal job to the extent that he brings about a realistic degree of liking among community members for the school and its personnel. Items to assess his success are found in Table 5.

Table 4 summarizes administrative functions with regard to the community, including the areas of importance, competence, and affection.

Table 4

Successful Results of Administrator Functioning in the Area of School-Community Relations

Function	Importance	Competence	Affection
	Community members:	Community members:	Community members:
Motivate	have a realistic feeling about the importance of the school.	have a realistic feeling about the competence of the job the school is doing.	have a realistic liking for the school.
Provide knowledge and opportunity	devote an appropriate and realistic amount of time and energy to the schools.	devote appropriate and realistic amounts of energy to helping with running of the school, through citizens' committees, responsible criticism, etc.	give appropriate and realistic support, identification and and friendship to the school and its personnel.
Prevent	don't lack time and energy to contribute to school (apathy).	don't lack cooperation in helping with school policy (abdicracy).	don't personally reject the school staff (hostility).
	don't clutter the time and energy of school personnel (interference).	don't interfere with autonomy and freedom of schools (domination).	don't expect decisions to be made on personal rather than rational bases (favoritism).
Provide personal gratification	have a feeling of recognition and importance	have a feeling of accomplishment and competence	have a feeling of being liked and being likeable.

Table 5

PSI (Perception of School Interaction) for School Principals

Taken by Parents
(An undeveloped instrument)

Below are several statements that ask you to guess how the parents of the children at your school - that is, the school your child attends - feel about certain things about the school. Read each statement and place a number from one to six on the answer sheet - the number that comes closest to how you feel about the statement. Here's what the numbers mean:

1. Almost never true at my school
2. Rarely true at my school
3. Sometimes true at my school
4. Often true at my school
5. Usually true at my school
6. Almost always true at my school

1. The parents really believe that the school is an extremely important place, doing important work.

2. The parents really believe they have an important part to play in helping the school achieve its educational goals.

3. The school makes clear to the parents how they may help the schools.

4. The school provides an opportunity for any parent to contribute time to the schools.

5. The school gives recognition for the time and effort parents contribute to the schools.

6. The school is doing an excellent job of educating students.

7. The schools keep parents informed as to how they may participate in making school policy and programs.

8. Parents try to inform themselves about the schools and take other actions which will make their contributions more effective.

9. The schools allow parents the opportunity to participate appropriately in school policy decisions.

10. The schools give recognition for the excellence of contributions made by parents to school policy and program.

11. The parents really like the school and take pride in it.

12. School personnel act very friendly and personal toward the parents.

The teachers. The teachers are the school's technicians. They are the key persons in the teaching-learning process around which the educational system is built. An essential element of learning is that a student must learn from someone. The competence of a teacher is obviously vital to the success of the school. Competence includes knowledge of subject matter, skill in teaching, and competence as a person. Educational controversies seem often to evolve from overemphasis on one of these to the detriment of others. It seems that often the importance of the teacher as a well-integrated, rich, vital, curious, independent person is ignored when teaching standards are considered. In some ways it could be argued that a teacher teaches more through what he is than through what he says.

The administrator must strive to create an atmosphere in which all three requirements for a teacher are encouraged--good knowledge of subject matter, good teaching ability, and a well rounded personality. It is the administrator's responsibility to see that all the teachers within his jurisdiction are the best available and are effective to the limit of their capacities (Anderson, 1952).

It is very difficult to measure effectiveness in this area objectively. Probably here it is more feasible to rely on a survey of attitudes and feelings of the teacher and others to determine the success with which optimal conditions are being created. The basis for such a survey follows, again in terms of the areas of importance, competence, and affection.

Importance. Motivating the teacher to see the importance of his job and therefore to devote sufficient time and energy to it is a primary responsibility of the administrator. Many teachers enter the profession with high motivation and require little from the administrator in this area. However, many teachers do not place their job high in their value hierarchy; for example, for many women their job is just a means of support until they get married, and for many men it is simply a stepping stone to administration. It is especially important to motivate these teachers.

The administrator's function is to work out with each teacher a realistic amount of time and energy to devote to teaching duties, in terms of the needs of the school and of the teacher. He should also provide the opportunity for that time to be devoted to teaching; teachers should be free of duties that impose on time that should be devoted to teaching functions.

If the teacher undervalues his job, he will not devote enough time and energy to it and will thus not produce up to capacity. If he overvalues the importance of his job and function, he may overwork to the detriment of the rest of his life activities and even his health. It is important for the administrator to encourage a realistic picture and to discourage these extremes.

The personal gratification the teacher derives in this area comes from a feeling of personal importance and significance. He receives this partly from the administrator's attention and interest in the teacher as an individual.

The effectiveness of the administrator here may be measured by the degree to which he achieves these aims:

(1) Assures that teachers have a realistic picture of the actual importance and significance of teaching;

(2) Works out with teachers the amount of time they can devote to teaching in terms of their own needs and the requirements of the school;

(3) Allows opportunity for the teacher to devote the appropriate amount of time to teaching;

(4) Grants personal recognition to the teacher.

The administrator's success in these respects can be assessed by items like those in Table 7 following this section.

Competence. The administrator's function with respect to competence is to motivate teachers to want to achieve competence in their profession, to show them how to improve, and to provide an opportunity for such improvement.

The administrator should work out with teachers a realistic level of competence they can be expected to achieve and maintain. Periodic evaluations are essential to keep each teacher informed about the degree to which he is achieving what is expected. Then the teacher must be given the opportunity to learn and to improve his teaching ability.

If the teacher achieves too little, he is an incompetent teacher. If he works too hard at becoming more competent, he may do it at the expense of other aspects of his life.

Personal gratification comes to the teacher in this area from the feeling of a job well done. The sense of accomplishment at achieving excellence is an important source of pleasure. This feeling is enhanced by the administrator's recognition of his achievement.

The administrator's effectiveness is measured by the degree to which he achieves these aims:

(1) Motivates teachers to improve their teaching abilities;

(2) Enables them to know how to improve;

(3) Gives them an opportunity to use their abilities and to improve them;

(4) Grants recognition for excellence, giving informative evaluation.

These may be assessed by items like those in Table 7.

Affection. The administrator's job in this area is to maximize the teachers' liking and feeling of warmth toward teaching and toward the school. Such a feeling leads to identification with the school and the goals and to a greater acceptance of school activities.

Failure to attain a sufficient degree of liking means that the teacher will regard teaching as just a job, and probably that he will find many petty things annoying. Too much liking for the school may lead to excessive emotional involvement and identification with school activities, with accompanying feelings of, for example, inappropriate personal rejection when the schools are criticized.

Personal gratification for the teacher comes from liking and being liked by the people with whom he comes in contact. Feelings of personal warmth from the administrator are helpful.

Thus, in the area of affection the administrator does an optimal job to the extent that he can help teachers to like their school, job, and colleagues. Items to assess his success are found in Table 7.

Table 6 summarizes the administrator's functions with respect to teachers in the areas of importance, competence, and liking.

Table 6

Successful Results of Administrator Functioning in the Area of Teacher Relations

Function	Importance	Competence	Affection
	Teachers:	Teachers:	Teachers:
Motivate	have a realistic feeling about the importance of education and of teaching.	want to improve their teaching ability.	are motivated to like the school.
Provide knowledge and opportunity	devote an appropriate amount of time to teaching.	devote an appropriate amount of energy to improving their knowledge, skill and being.	have an opportunity to identify with and support the school.
Prevent	don't devote insufficient time to schools.	are not incompetent.	don't feel that everything is an annoyance.
	don't narrow their outside activities excessively.	don't put too much stress on overachievement or feel anxious about it.	don't feel excessive emotional involvement and identification.
Provide personal gratification	have a feeling of personal importance, worth and meaning.	have a feeling of accomplishment and achievement, and know where they stand.	have a feeling of personal likability.

Table 7

PSI (Perception of School Interaction) for School Principals

Taken by Teachers
(An undeveloped insturment)

Below are several statements that ask you to guess how the teachers at your school feel about certain things about the school. Read each statement and place a number from one to six on the answer sheet-the number that comes closest to how you feel about the statement.

1. Almost never true at my school
2. Rarely true at my school
3. Sometimes true at my school
4. Often true at my school
5. Usually true at my school
6. Almost always true at my school

1. The teachers really believe that the school is an extremely important place, doing important work.

2. The teachers really believe they have an important part to play in helping the school achieve its educational goals.

3. The principal makes clear to the teachers how they can best help the schools.

4. The principal provides opportunity for any teacher to contribute extra time to the schools.

5. The principal gives recognition for the time and effort teachers expend.

6. The principal helps the teachers do the best possible job of educating students.

7. The principal keeps teachers informed as to how they may participate in making school policy and programs.

8. Teachers try to inform themselves about recent developments in education and take other actions which will make more effective teachers.

9. Teachers are allowed the opportunity to participate appropriately in school policy decisions.

10. The principal gives recognition for the excellence of contributions teachers make to school policy and program.

11. The teachers really like the school and take pride in it.

12. School administrative personnel act very friendly and personal toward the teachers.

13. The principal keeps the teacher informed how she is doing at frequent intervals so that she knows what needs improvement.

14. The teacher is given sufficient opportunity to express her opinions about school policy and procedures and about her own treatment.

__The facilitative staff.__ The third important group of people with whom the administrator must maintain satisfying and effective relations may be called the facilitative staff. This includes all the people whose primary job is to facilitate the teaching-learning process. That is, they are employees of the school but they are not directly engaged in classroom teaching. Their function is to expedite some aspect of the educational situation so that the teaching-learning process can be performed optimally. These people include assistant superintendents, vice-principals, business manager, cafeteria manager, etc. Supervisors and consultants usually fall between facilitative and teaching staff (Anderson, 1952). The board of education falls between the facilitative staff and the community.

The term "administrative staff" is often used in the way that "facilitative staff" is used here. The latter term is used here to avoid confusion, and "administrator" is reserved for the principal and superintendent.

A good facilitative staff can have an enormous impact on the optimal functioning of an organization. Good administration is usually characterized by unobtrusiveness. The operational needs of the teachers should be provided in as convenient a manner as possible with the least involvement by the teacher. In other words, a good facilitative staff creates conditions under which teachers can concentrate all their efforts on doing the best teaching job. Poor facilitation results in teachers and students becoming embroiled in non-teaching activities, being blocked in their attempts to improve their teaching performance, becoming involved in unsatisfying and discouraging interpersonal frictions, confused by lack of coordinaation and integration, and generally prevented from accomplishing or wanting to accomplish the primary goals of the school.

Hence it is essential that the administrator acquire the best facilitators available and then create conditions leading to motivated facilitators who know how to discharge their jobs, have the opportunity to do it, and derive personal gratification from their work.

Objective measures of effective facilitative functioning include such things as balanced budget, presentable school plant, and generally the criteria used by Mort and his collaborators (1953) in their studies of the "growing edge." As in the areas described above, measurement can also be made through surveys of perceptions of various interactors.

Importance. Motivating the facilitator to see the importance of his job and therefore to devote sufficient time and energy to it is an important and often very difficult task. It is frequently difficult for a facilitative person to accept the importance of his position, since it is not the primary focus of the organization's activity. Frequently facilitators have been teachers and are caught in a conflict between teaching and facilitating. There may be little status given to facilitators by technical people, and they are often used as scapegoats for organizational difficulties for which they are often not responsible. Further, they sometimes attempt to emphasize the technical side of their jobs even when their training or ability does not qualify them for a position of educational leadership. There is typically difficulty for a facilitator to accept the fact that there is a science as well as an art to effective facilitation. (In fact, this report is an attempt to make a contribution to that science.) For these reasons it is not a simple job to convince the facilitative staff of their significance.

The administrator's function is to work out with each facilitator the amount of time and energy that should be devoted to his duties, and to provide a sufficient opportunity for the facilitator to carry out his job consistent with the accomplishment of the primary educational goals. For example, if a supervisor wishes to present a demonstration to teachers, he should be freed from other duties for enough time to prepare and present it.

If the facilitator undervalues his job, he does not devote enough of himself to it and consequently the task suffers. If, on the other hand, he overvalues his job, he may tend to be overzealous and hinder the activities he should be facilitating, through rigid and uncompromising enforcement of regulations.

The personal gratification the facilitator derives comes from a feeling of personal significance and importance--the knowledge that he is contributing to an important enterprise. This gratification comes partly from recognition from the administrator.

The effectiveness of an administrator in the area of facilitative staff relations can be measured by the degree to which he achieves these aims:

(1) Facilitators have a realistic picture of the actual importance and significance of their jobs;

(2) Works out with each facilitator the amount of time he can devote to his job in terms of his own needs and requirements and those of the school;

(3) Allows opportunity for the facilitator to devote the appropriate amount of time to his job without unnecessary interruption;

(4) Grants personal recognition to the facilitator.

These may be assessed by the items presented in Table 9 at the end of this section.

Competence. The administrator's role in the area of facilitator competence is to motivate the facilitators to want to perform their jobs with optimal efficiency, to guide them sufficiently to help them to attain this competence, and to allow them the opportunity to use their abilities on the job.

Here the administrator himself may have more technical competence than in other areas. He may thus be able to guide facilitators personally more often, rather than delegating this job to others. Since he is himself an administrator, principles of organization, coordination, and other administrative or facilitative skills are usually well known to him. Motivation to do good facilitative work probably comes from example, and from the realization that good work does greatly facilitate the educational goal and is personally rewarding (Dubin, 1953).

The ability to exercise competent facilitative skills revolves around the issue of delegation. The most effective administrator allows his subordinates the most latitude in their areas of greatest competence. This involves an intimate acquaintance with the skills of his facilitators as well as with his own strengths and weaknesses. Governing his own activities is included in the facilitator competence area, in that the administrator must undertake those jobs for which he has the greatest personal competence and delegate the other jobs to those facilitators who are most competent to handle them.

Personal gratification comes to the facilitator from the feeling of a job well done. The administrator can contribute greatly to this feeling through rewarding excellence of facilitative functioning. Reward is probably best given through an efficient periodic evaluation system in which the facilitator is given a clear picture of how well he is doing his job, what his strong and weak points are, and how he may improve. Reciprocally, the facilitator is often more personally gratified if he, too, has an opportunity to express his feelings about his own performance and what he likes and doesn't like about the organization (including the administrator) and how it affects his own performance.

The effectiveness of the administrator is measured by the degree to which he achieves these aims:

(1) Motivates facilitators to improve their administrative skills;

(2) Enables them to learn how to improve;

(3) Gives them the opportunity to improve and to use their abilities;

(4) Grants rewards for excellence, allowing for evaluation of their performance at periodic intervals.

These may be assessed by items like those in Table 9 following this section.

Affection. The administrator's job in this area is to maximize the facilitator's liking for his job situation. He may feel that it has significance and he may attain competence, but if he does not like the job situation, he may leave it, or at least lose motivation.

Failure to attain a sufficient degree of liking means that the facilitator's interest will wane. Too much liking for the job situation may lead to placing undeserved importance on the job and a lack of desire to leave it even if it is realistically appropriate.

Personal gratification for the facilitator comes from liking and being liked by the people with whom he comes in contact and from liking the job situation. A feeling of personal warmth from the administrator may contribute to this feeling.

In the area of affection the administrator does an optimal job to the degree that he:

(1) Inspires facilitators to like their job situation and colleagues;

(2) Expresses his own feelings of affection toward them.

These may be measured by items presented in Table 9.

Table 8 summarizes the administrator's functions with respect to facilitative staff in the areas of importance, competence, and affection.

The students. Similar remarks to those made for community, teachers, and facilitators may be made about the importance of motivating, guiding, and allowing the students to realize the importance of being students, of studying hard and doing their best, and to like the school and the role of student (Anderson, 1952). Since this study will probably not investigate student reactions because of the difficulties involved, only the measuring instrument will be described here. It is presented in Table 10.

Table 8

Successful Results of Administrator Functioning in the Area of Relations with the Facilitating Staff

Function	Importance	Competence	Affection
	Facilitators:	Facilitators:	Facilitators:
Motivate	have a realistic feeling about the importance of the facilitative function.	want to improve their facilitative ability.	are motivated to like the school and their jobs.
Provide knowledge and opportunity	devote an appropriate amount of time and energy to facilitating.	devote an appropriate amount of time to improving their knowledge and abilities.	have an opportunity to identify with and support the school.
Prevent	don't devote insufficient time and energy to school facilitation.	are not incompetent.	don't find their jobs and school a chore.
	are not overzealous in their evaluation of their significance.	do not put their own jobs disproportionately ahead of other school goals.	don't become unrealistically emotionally involved with their jobs.
Provide personal gratification	have a feeling of personal worth and importance.	have a feeling of accomplishment and achievement, and know where they stand.	have a feeling of being liked and likeable.

Table 9

PSI (Perception of School Interaction) for School Principals
Taken by Facilitators
(An undeveloped instrument)

Below are several statements that ask you to guess how your school's facilitative staff (school board, vice-principal, business manager, cafeteria manager, etc.) feel about certain things about the school. Read each statement and place a number from one to six on the answer sheet-the number that comes closest to how you feel about the statement. Here's what the numbers mean:

1. Almost never true at my school
2. Rarely true at my school
3. Sometimes true at my school
4. Often true at my school
5. Usually true at my school
6. Almost always true at my school

1. The administrative staff really believe that the school is an extremely important place, doing important work.

2. The administrative staff really believe they have an important part to play in helping the school achieve its educational goals.

3. It is made clear to the administrative staff how they can best help the schools.

4. Opportunity is provided for any member of the administrative staff to contribute extra time to the schools.

5. The principal gives recognition for the time and effort administrative staff members expend.

6. The school is doing the best possible job of educating students.

7. Administrative staff are kept informed as to how they may participate in making school policy and programs.

8. Members of the administrative staff try to inform themselves about recent developments in education and take other actions which will help them do their jobs more effectively.

9. Administrative staff are allowed the opportunity to participate appropriately in school policy decisions.

10. Recognition is given for the excellence of contributions made to school policy and program by administrative staff members.

11. The administrative staff really like the school and take pride in it.

12. Other school personnel act very friendly and personal toward administrative staff members.

13. Administrative staff members are kept informed as to how they are doing at frequent intervals so that they know what needs improvement.

14. Administrative staff members are given sufficient opportunity to express their opinions about school policy and procedures and about their own treatment.

Table 10

PSI (Perception of School Interaction) for School Principals

Taken by Students
(An undeveloped instrument)

Below are several statements that ask you to guess how the students at your school feel about certain things about the school. Read each statement and place a number from one to six on the answer sheet - the number that comes closest to how you feel about the statement. Here's what the numbers mean:

1. Almost never true at my school
2. Rarely true at my school
3. Sometimes true at my school
4. Often true at my school
5. Usually true at my school
6. Almost always true at my school

1. The students really believe that the school is an extremely important place, doing important work.

2. The students really believe they have an important part to play in helping the school achieve its educational goals.

3. The school makes clear to students how they may help to learn better.

4. The school provides an opportunity for any student to do extra work if he wishes.

5. The school gives recognition for the time and effort students spend on their work.

6. The school is doing an excellent job of educating students.

7. The schools keep students informed as to how they may participate in making school policy and programs.

8. Students try to inform themselves about the activities of the schools.

9. The schools allow students the opportunity to participate appropriately in school policy decisions.

10. The schools give recognition for the excellence of student achievements.

11. The students really like the school and take pride in it.

12. School personnel act very friendly and personal toward the students.

13. Students are dept informed of how they are doing at frequent intervals so that they know what needs improvement.

14. The student is given sufficient opportunity to express his opinions about school policy and procedures and about how he is treated.

Functions of the administrator have now been described, and some examples of instruments for measuring the success with which these functions are accomplished have been suggested. The next level of administrative activity available for assessment will now be considered: The kinds of behavior on the part of the administrator that lead to success in motivating, guiding, and allowing the relevant groups to contribute optimally to the school aims.

Investigations indicate (Barnard, 1938, Cartwright and Zander, 1953) that the primary behavior areas are interpersonal effectiveness and problem solving ability. How well the administrator motivates others is usually a function of his behavior and feelings toward them, and of theirs toward him. If they like and respect him, and if he has a generally satisfactory relation with them, they will probably be influenced to cooperate in accomplishing school goals.

The administrator's ability to guide others successfully is primarily a function of his technical knowledge and administrative ability. He must have available information as to what to do and how to do it, and he must have the necessary adminstative skills to organize, coordinate, and integrate activities so that they are accomplished optimally.

Problem-Solving Effectiveness. This section and the next one on interpersonal effectiveness involve direct assessment of the administrator's performance rather than of the result of his performance as in the criteria discussed above. The two major areas of performance are task or problem-solving behavior and interpersonal behavior. Some of the administrator's activity is directed at accomplishing the goals of the school and some at maintaining his organization through successful relations among the people involved in goal accomplishment (Argyris, 1957).

An administrator may be evaluated on the degree to which he accomplishes his technical and administrative goals. Within the administrator's job there are things he must know and do which are specifically administrative. That is, there is a body of knowledge and skill about both education and administration that an administrator must have available in order to do his best job and to guide others effectively.

These skills may be divided into three types: a) decision-making ability: the general ability to make sound, well-thought-through decisions about all problems facing the administrator; b) administrative skill: the ability to support and facilitate the teaching-learning activities through such procedures as budget balancing, upkeep of school plant, coordination of activities, dissemination of information, and selection of personnel; and c) technical knowledge of educational administration: knowledge of school law, school finance, school building, history of education, and other subjects basic to good decision making in educational administration (Griffiths, 1956).

Decision-making ability. The literature on scientific method and decision theory provides a basis for a paradigm of good decision making applicable to the administrative situation. A model of ideal decision-making behavior will be constructed, to which actual decision-making behavior will be compared. This model applies to any decision procedure. (Chernoff and Moses, 1959)

(1) Statement of problem. The administrator should anticipate, recognize, and state clearly the problems of the school system that must be solved in order to attain the objectives of the school. He must organize his school unit in such a way that problems are identified in sufficient time to mobilize the best forces available to solve the problem. Problems for the school unit include all those that affect the attainment of school objectives.

An administrative mechanism should exist for the recognition of problems in all content areas of school--community relations, staff relations, and the educational program. For example, budget requirements should be worked out in time for bond or tax elections, teaching methods should be evaluated in time for the school year, etc.

(2) Collection of data. An administrative procedure should exist for collecting the best available data relevant to any given problem. This involves coordinating and integrating the efforts of the people best qualified to provide information on a particular problem. Such data include any relevant evidence from research, personal experience, or any other source related to potential solution of the problem. Accurate, complete information must be available.

A characteristic of many administrative decisions is that data collection is interdependent with assessing the consequences of various courses of action, since problems require solutions that will satisfy over-all objectives of the schools. In other words, they are often "systems" problems in that a course of action may change a number of activities. For example, trying an experimental method on one class may be expected to improve teaching, but it may also antagonize parents and arouse jealousy in other classes. Thus, there must be good integration among the various segments of the school system.

(3) Alternative hypotheses. In order to find the best solution to a problem, all possible solutions should be listed as hypotheses. These are usually derived interdependently with data collection; some data may suggest a hypothesis which in turn requires that further data be collected. For example, when a parent complains that a child is not reading fast enough, two hypotheses may be: (a) teacher is incompetent; (b) parent is pressuring child too much. Each hypothesis suggests the collection of further and perhaps different data. The first would suggest finding information about the teacher in other classes; the second would suggest finding out about other children of the parent or interviewing her again.

(4) Courses of action. All the actions that might be taken by the administrator to solve the problem must be considered. For example, in the above instance the administrator might move the child, leave him alone, talk to the teacher, reprimand the parent, or give the child special instruction.

(5) Outcomes of actions. The probability of a particular outcome of each action is partly a function of the hypotheses. For example, moving the child will have the outcome "child's reading improves" if Hypothesis 1, "teacher is incompetent," is true. However, if Hypothesis 2, "parent is pressuring child too much," is true, then moving the child will have the outcome, "no change." The probability of each outcome for each course of action should be considered.

(6) Desirability of outcome. Each outcome is rated for desirability according to the various functions of the school. For example, telling the parent to stop pressuring the child may lead to a highly desirable outcome with respect to the goal "have children learn," but to an undesirable outcome with respect to the public relations goal (if the parent is offended).

(7) Desirability of goal. Each goal is rated for relative desirability. In the example above, if "children learn" is a more highly valued goal than public relations, then telling the parent is all right.This requires that the administrator have a clear notion of his hierarchy of goals for the school.

(8) Decision. There are several methods of resolution, depending on whether or not the administrator is conservative or adventurous. He may compute (informally) for each possible decision, the probability times the desirability of every outcome and choose the decision with the highest score; or he may choose to minimize his maximum loss by selecting the decision for which the worst possible outcome is least bad. Or he may choose the first solution he thinks of that is satisfactory. In other words, the administrator has available several decision-making procedures and chooses one in accord with his own values and situation.

(9) Test of decision. After the decision has been acted on, it should be followed up to see if it really worked. The next time a similar problem arises, the administrator will then have this information available (Griffiths, 1952).

If this model for decision making is accepted, the ideal problem-solving behavior of a school administrator may be described as follows:

1. Administrator anticipates problems; plans for the future; organizes his staff and resources so as to meet future events most effectively.

2. Recognizes problems when they occur; sees them clearly and can present them clearly to others.

3. When problems arise, the administrator conscientiously gathers all available information relevant to solving the problem; he makes sure to hear all sides before making a decision.

4. When confronted with a complaint or a claim by someone, the administrator checks into the source of the assertion to determine its reliability.

5. The administrator is creative and imaginative in getting to the reasons behind problems; he often can sense things going on that most people miss.

6. He is flexible in being able to accept many possible explanations or problems that arise in the school.

7. He is creative in thinking of many approaches to solving a problem in addition to the usual methods, which he knows well.

8. When deciding what action to take, the administrator usually considers all possibilities before choosing one, rather than doing the first thing that occurs to him.

9. The administrator is aware of possible effects of his actions on others; he is able to anticipate people's reactions accurately.

10. He is well enough informed about the total school situation to be aware of all the implications of his actions.

11. He knows the goals of the school and has a clear idea of which goals are more important than others--the hierarchy of educational values.

12. He is able to communicate the goals and objectives of the school to the staff and the community so that there is no ambiguity about what the school is trying to achieve.

13. He is not easily swayed by pressures that would interfere with accomplishing the goals of the school; he sticks with his convictions.

14. He is not unduly rigid about adhering to his ideas if the reality of the situation suggests change.

15. The administrator's decisions are reasonable, not unjustifiably wild or bizarre.

16. His decisions are also reasonable in not being overly conservative, overly safe, nor unimaginative.

17. The administrator follows up his decisions to see if they worked, so that he can profit from this knowledge; this includes evaluating all types of decisions.

The degree to which an administrator follows this procedure may be measured through a scaling procedure. For this study, items were constructed to determine whether or not each step of this procedure is carried out well in the administrator's school. These items were then scaled according to the Guttman method, and a nine-item scale emerged. This scale, given in Table 11, constitutes the measure of decision-making ability. To provide additional information, respondents were also asked whether or not the function is carried out by the administrator himself, or delegated to someone else.

Administrative skill. The unique job of the administrator is to create conditions under which all group functions are performed optimally. This requires some procedureal skills like coordination of all activities, some jobs that are accomplished almost entirely by the facilitative staff like budget and building maintenance, and some activities supportive of the teaching-learning situation like encouraging and allowing for teacher improvement (Barnard, 1938).

These skills may also be measured by a series of scales. The three areas that seem to be representative of these administrative skills, according to a consensus of the literature in this area, are communication, general administrative behavior, and instructional leadership. The items were handled in the same way as those on the decision-making scale described above. Thus, there emerge three nine-item Guttman scales, given in Table 12.

Table 11

Scale of Administrative Decision-Making

Following are several statements related to school functioning. Please respond to each item as it applies to your school. On the answer sheet place a number from one to six in the column marked "How true?", where the numbers mean:

1. Almost never true of my school
2. Rarely true of my school
3. Sometimes true of my school
4. Often true of my school
5. Usually true of my school
6. Almost always true of my school

1. Possible problems or issues are anticipated. (5,6)

2. Situations in the school where real problems exist are recognized and acknowledged. (5,6)

3. All relevant information is obtained before decisions are made. (3,4,5,6)

4. Sources of information are weighed carefully. (5,6)

5. All elements relating to problems or issues are taken into account. (5,6)

6. Unique possible solutions are considered for school problems. (4,5,6)

7. Possible solutions to a problem are weighed critically. (4,5,6)

8. Consideration is given to the important implications of a course of action. (4,5,6)

9. Solutions, once agreed upon, reflect critical and logical thinking. (4,5,6)

Numbers in parentheses indicate answer categories scored as acceptance of item. Scores range from zero to nine (number accepted).

Table 12

Scales for Measuring Administrative Skills

(Instructions are the same as for decision-making scale, above)

Scale I, Communication

1. Teachers are kept informed of central office policy changes affecting the school. (6)

2. The community and parents are kept aware of the accomplishments of the school and the students. (6)

3. Teachers are kept informed as to how their work is evaluated. (6)

4. Staff menbers discuss their problems and concerns freely with each other. (5,6)

5. Teachers and parents feel free to make suggestions for improving the school. (5,6)

6. Staff members know how people feel about the school and its program. (5,6)

7. Teachers express their opinions and feelings freely. (4,5,6)

8. The staff has a good knowledge of the feelings and opinions of the children about school. (6)

9. There is good communication between the teachers and other members of the school staff (custodians, gardeners, cafeteria workers, etc.). (4,5,6)

Scale II, General Administrative Behavior

1. Adequate help and supervision are provided for teachers. (5,6)

2. An effective system of pupil discipline is supported and maintained. (4,5,6)

3. An effective system of guidance for the pupils is supported and maintained. (6)

4. Adequate materials needed for instruction are available. (6)

5. Teachers are not overloaded with non-teaching assignments (hall duty, yard supervision, etc.). (6)

6. Extracurricular activities are orgnaized so that they function smoothly. (4.5.6)

7. Schedules required for the effective operation of the school are made. (6)

8. Buildings and grounds are maintained in a satisfactory and attractive manner. (5,6)

(cont'd.)

Table 12, continued:

9. There is an adequate system for reporting the progress of pupils to their parents. (6)

Scale III, Instructional Leadership

1. Experimentation and new approaches in instruction occur reasonably often. (5,6)

2. There is a constant evaluation of the total learning program, (5,6)

3. New ideas and information relating to education are regularly discussed. (6)

4. New developments in each subject area are called to the staff's attention. (6)

5. Information is regularly available on new teaching materials, aids, resorces, etc. (4,5,6)

6. Current events of significance and importance for the school are regularly discussed. (6)

7. The staff's attention is called to important and interesting articles or publications. (4,5,6)

8. Released time is available for teachers to work on special projects or ideas designed to improve the school program. (4,5,6)

9. High standards of academic achievement and learning are expected of the students. (6)

Technical knowledge. In order to do the best job of coordinating the work of the various school-related groups, there are several areas of substantive information the administrator must have at his disposal.

With regard to community relations, he must know about community structure, the formal and informal political structure, the ethnic and religious distribution and traditions, etc. In other words, the administrator should be familiar with urban or rural sociology, other sociological topics related to community functioning, political science, and social psychology.

Relations with teachers and with students requires a thorough grounding in current educational methods, the teaching-learning process, and some acquaintance with the subject matter of the basic courses. Central to an understanding in this area is a knowledge of group and individual psychology in order that he will be able to understand the dynamics of classroom behavior and emotional and intellectual blocks to learning.

Facilitative duties require a knowledge of the bases for administering a public educational institution such as school law; finance; federal, state, and local organization; personnel; building; etc. A knowledge of basic economics, accounting, and government would also be important.

Thus the technical knowledge required of a school administrator to supplement his problem-solving ability, administrative skill, and interpersonal effectiveness includes: Community sociology; political science and government; individual, group, and social psychology; economics and accounting; and specific school-related topics such as school law, finance, and organization.

The administrator need not know all these things himself, but he should know where to find out what he does not know.

This kind of knowledge can be measured by a standard information test covering the areas as they relate specifically to educational administration. Such a test is now being developed with the assistance of professors of educational administration.

Interpersonal Effectiveness. As discussed above, the administrator is successful interpersonally insofar as he gets cooperation in accomplishing school objectives from the community, teachers, facilitative staff, and students. In this section the administrator's interpersonal relations will again be explored, but instead of being concerned with whether or not he achieves cooperation, the focus will be on what he does and feels in his interaction with people, and what they do and feel toward him. This exploration will lead to a criterion of administrative effectiveness involving the interactors' perceptions of the administrator's performance, both in his role as administrator and as a person.

It is assumed here, as mentioned above, that the goal of affording personal gratification to the administrator's interactors has two objectives. The first is to increase the probability of achieving school aims. It is assumed that certain types of interaction lead to better accomplishment of goals, an assumption that can and will be tested. The second objective is to make the school a gratifying social institution. That is, the personal satisfaction of the administrator's interactors in dealing with him and the school is regarded as a social value in itself, independent of whether or not it leads to cooperation.

Here again, the FIRO theory of interpersonal behavior is used as a framework for measurement of the administrator's relations. Since the basic data dealt with are perceptions of administrative interaction, analysis of all possible perceptions goes somewhat beyond what is required for a criterion measure. By taking the same measures used in the evaluation of effectiveness and analyzing them in different ways, other interesting information can be obtained. These peripheral concepts will be described along with the criterion measures.

The basic variables of the FIRO theory have been described in a previous section. They are summarized in Table 13.

Table 13

Schema of FIRO Interpersonal Behaviors and Feelings

Dimension	Expressed Behavior	Wanted Behavior
Inclusion	I initiate interaction with people.	I want to be included.
Control	I control people.	I want people to contol. me.
Affection	I act close and personal toward people.	I want people to act close and personal toward me.
	Expressed Feeling	**Wanted Feeling**
Inclusion	I feel people are important.	I want people to feel I'm important.
Control	I trust people's competence.	I want people to feel I'm competent.
Affection	I like people.	I want people to like me.

Beginning with this schema, the maximum number of relations of the administrator with his interactors was explored by substructing the entire relation. The significant dimensions are:

1) Actor. Who initiates the interaction toward the other person (the target)? The actor can be either the administrator or the interactor.

2) Direction. Is the behavior expressed by the actor toward the target, or is it wanted by the actor from the target? Direction can be either expressed or wanted.

3) Perceiver. Who is perceiving the behavior? Perceiver can be either administrator or interactor.

4) Dimensions. What aspect of the relation is being perceived? Dimensions may be inclusion, control, or affection.

5) Levels. On what psychological level are the dimensions being considered? Levels may be behavior or feelings.

These facets are summarized schematically in Table 14.

Table 14

Substruction of Perceptions of Administrative Interaction

			Perceiver: Administrator			Perceiver: Interactor		
			Inclusion	Control	Affection	Inclusion	Control	Affection
Actor: Adminis- trator	Expressed to Interadtor	Behavior	11	12 Ⓐ	13	14	15 Ⓔ	16
		Feelings	21	22	23	24	25	26
	Wanted from interactor	Behavior	31	32 B	33	34	35 F	36
		Feelings	41	42	43	44	45	46
Actor: Inter- Actor	Expressed to Administrator	Behavior	51	52 C	53	54	55 G	56
		Feelings	61	62	63	64	65	66
	Wanted from Administrator	Behavior	71	72 D	73	74	75 H	76
		Feelings	81	82	83	84	85	86

A separate scale was constructed for each cell of Table 14. These scales are collectively called the PAI (perception of administrative interaction) scales.

It is now important to consider the way in which these measures can be used to evaluate administrative interaction. The problem of assessing how one person evaluates another may be approached at three levels.

Trait satisfaction. The simplest approach is to ask the interactor for his evaluation of the administrator on various scales that measure traits usually felt to be "good," like competence, likeability, understanding, etc. This involves one scale and one score, and an administrator is assumed to be satisfactory to the degree that he scores high on scales of "good" traits.

Personal satisfaction. Since not all interactors want the same things from administrators, the trait evaluation may be elaborated by comparing the interactor's ratings of the administrator with what the interactor would like from the administrator. For example, how friendly the interactor feels the administrator is can be compared with how friendly he would like him to be. This takes account of differences in desires or requirements (sometimes inaccurately called expectations) set for the administrator by different interactors. The closer the administrator's performance as seen by an interactor matches the interactor's desires for the administrator's behavior, the more satisfactory the administrator is to the interactor. It is assumed that an administrator is satisfactory to the degree that his performance meets the desires of his interactors.

Relational satisfaction. A third approach is based on the assumption that the administrator will be satisfactory not only if his behavior meets the desires of the interactors, but also if the interactors feel that their behavior and feelings meet the administrator's desires. For example, a superintendent may be rated high on competence (trait), be rated as high as the parents in the community want him to be on competence (personal), but he may make them feel they are incompetent, even stupid (relational). Thus, their evaluation in the area of the administrator's competence would be that their relation with him is, at best, only partly satisfactory.

Underlying this approach is the notion that a person feels positively toward someone who allows him to express the parts of himself that are most self-admired, including prominently the ability to satisfy another person. Failure of the administrator to be satisfied with the interactor leads the interactor to have feelings of inadequacy in an interpersonal relation and a consequent feeling of imminent rejection, thus making the relation highly undesirable. (For a similar notion, see "authentic relationship" in Argyris, 1957.)

Measures of trait satisfaction. This type of satisfaction measure has probably been used more widely than the others. Therefore it is important to explicate the most commonly used traits in terms of the present theoretical framework.

From these considerations, two PAI scales seem to embody several notions often used in studies of this type. These, then, comprise the trait satisfaction measures:

1. The interactor's perception of the administrator's competence (cell 65, Table 14).
2. The interactor's liking for the administrator (cell 66).

Measures of personal satisfaction. The degree to which the interactor is satisfied with the performance of the administrator is given by the difference between what the interactor says he wants from the administrator (octant H, Table 14) and what the interactor perceives the administrator as doing (octant E). This difference can be measured in the areas of inclusion, control, and affection, and for both behavior and feelings, thus making six measures of personal satisfaction.

Again the administrator's perception of how well he thinks he is satisfying the interactor may be obtained by taking the difference between what the administrator thinks the interactor wants from him (D) and what he himself thinks he is doing (A). This is not a precisely parallel measure because he may believe he is acting in a certain way (A) but not think the interactor perceives his behavior in the same way. If this were true, the difference between octants A and D would give an inaccurate picture of the administrator's perception of his personal success. However, the measure may be made with that limitation in mind.

Measures of relational satisfaction. The degree to which the administrator is satisfied with the behavior of the interactor is given by the difference between octants C and B. The degree to which the interactor is satisfied with the behavior of the administrator is given by the difference between octants E and H. The degree to which the interactor feels he is adequately satisfying the administrator's needs is given by the difference between octants F and G. The degree to which the administrator feels he is adequately satisfying the interactor's needs is given by the difference between A and D.

a) Reciprocal relational satisfaction. Combining the two scores will give each person's perception of the adequacy of the interpersonal relation. The administrator's perception of the adequacy of the relation is given by $|A-D|+|B-C|$, (the differences must not be allowed to cancel each other, thus the absolute signs). The interactor's perception of the adequacy of the relation is given by $|E-H|+|F-G|$.

The form of this measure is identical to that for the reciprocal compatibility, rK (see Schutz, 1958), thus leading to an interesting extension of the FIRO compatibility theory. The above equations might be called perceived reciprocal compatibility ($\bar{r}K$; the bar over r indicates perceived) of the administrator and interactor, that is, the degree to which they feel their relation was reciprocally compatible. This suggests the use of the other types of compatibility as measures of relational satisfaction.

b) Originator relational satisfaction. This index, which could be called perceived originator compatibility ($\bar{o}K$), measures the degree to which each interactor feels that his preference for expressing behavior rather than wanting it from others complements the other person's preference. For the administrator this is given by $(A-B) + (C-D)$. For the interactor, it is given by $(E-F) + (G-H)$.

c) Interchange relational satisfaction. This index, which could also be called perceived interchange compatibility ($\bar{x}K$), measures the degree to which each actor perceives that the amount of interchange he prefers, either expressed or wanted, in a given interpersonal area is similar to the amount desired by the other person in the relation. For the administrator this is given by $|(A+B) - (C+D)|$. For the interactor it is given by $|(E+F) - (G+H)|$.

The relational satisfaction measures may be summarized as follows:

As perceived by administrator:	As perceived by nteractor:
$\bar{r}K = \|A-D\| + \|B-C\|$	$\bar{r}K = \|E-H\| + \|F-G\|$
$\bar{o}K = (A-B) + (C-D)$	$\bar{o}K = (E-F) + (G-H)$
$\bar{x}K = \|(A+B) - (C+D)\|$	$\bar{x}K = \|(E+F) - (G+H)\|$

d) Derived scores. Since these scores are now in the same form as the original FIRO compatibility scores, similar combinations may be made. In addition, since the PAI scales include both behavior and feelings, and since there are separate scores for each interactor, the number of relational satisfaction scores is: 3 types (reciprocal, originator, interchange) times 3 areas (inclusion, control, affection) times 2 levels (behavior, feeling) times 2 perceivers (administrator, interactor) = 36 scores. In addition, there are derived scores. These are presented diagrammatically in Table 15.

2

TABLE 15

Measures of Relational Satisfaction

		Administrator (S)				Interactor (T)			
		I	C	A	Total$_s$	I	C	A	Total$_t$
BEHAVIOR	r								
	o								
	x								
	TOTAL Bhvr.								
FEELING	r								
	o								
	x								
	TOTAL Flgs.								

Related measures. One advantage of the substruction is that it reveals other possible combinations of scales that could be used to further the exploration. In particular, in the theoretical development just concluded there are two other measures that could prove interesting: similarity of perception and the perception of similarity. Since these are not directly germane to the assessment of administrative effectiveness, they will not be discussed further here.

This completes the presentation of administrative functions and their measurement. Two final factors remain to be considered before these measures are ready to be used to evaluate administrative effectiveness.

If any combined measure of effectiveness on each function is to be used, some system of weighting each function according to its relative importance to administrative effectiveness must be devised. Evaluating these functions lies outside the realm of research. Hence, practitioners in the field should be asked to rank them according to their relative importance. An over-all measure of administrative effectiveness would take this weighting into account. This weighting is only required if one wishes to combine criteria. Otherwise each criterion may be treated separately and policy makers may assign their own weight to it relative to a given situation.

A second factor relevant to a fair assessment of effectiveness concerns the external circumstances in which the administrator functions. Achieving these functions is not equally admirable regardless of circumstances. The administrator who accomplishes under great handicap should deserve more credit than one who has a relatively easy time. These factors are considered in the next section.

Measurement of Administrative Effectiveness

The functions enumerated above as bases for evaluating administrative effectiveness are summarized in Table 16.

Table 16

Hierarchy of Administrative Goals

1. Realization of potential of each child in school in the long run. This includes academic achievement, emotional adjustment, social adjustment, and physical health.
2. Maximal performance by community members, teachers, facilitative staff, and students relative to educational goals.
   a. Community members cooperate with the schools through such events as passing bonds, raising tax rate when needed, serving on citizens' committees, etc.
   b. Teachers cooperate by teaching up to their capacity and being selected to be the best available.
   c. Facilitating staff is best available and performs up to the limit of its ability.
   d. Students cooperate by learning to the limit of their capacity.
3. a. These four groups are motivated to cooperate.
   b. These four groups are properly guided so that they know what to do to cooperate.
   c. These four groups are allowed the opportunity to cooperate.
4. The administrator's problem-solving ability, administrative skill, and technical knowledge are sufficient for all the administrative problems confronting him.

Importance of Functions. The functions listed in Table 16 are in descending order of importance or desirability. That is, the listing contains two assumptions:

a) The first named aims are most important. The ones following are subgoals that are steps toward the ultimate goal.

b) The lower aim leads with high probability to the one above it.

Focus in the top goals is on the success or failure of the efforts of the administrator. If the children in the school achieve to the level of their ability over the long run, then, according to this conception, whether or not the subgoals were achieved is relatively unimportant (within reasonable limits). Similarly, achieving a subgoal (for example, community cooperation) is desirable, but it is primarily a step toward the more basic aim of student realization; hence, in this sense it is not as important a goal as the latter.

Generally it is expected that accomplishment of the lower goals will probably lead to achievement of the upper ones, but this formulation allows for unconventional behavior on the part of the administrator that nevertheless leads to successful goal achievement. In other words, the emphasis here is on accomplishment rather than on the procedures used to achieve goals. The stipulation that the goals must be achieved over a long run rules out the possibility of an administrator achieving goals over a short period of time by using destructive methods. Presumably, if the methods are unsound, the effectiveness of the school will decrease with time through teacher resignations, failure of bond issues, student apathy, etc.

An analogy may clarify the reasoning behind this approach. If we want to evaluate the batting ability of a particular baseball player, we may look at (a) his general physical coordination, (b) his form, the gracefulness of his swing and wrist snap, and (c) his batting average. All would be important to know. It is probable that if he is well coordinated, he can develop a good swing; and if he has a good swing, his batting average will be high. But his batting average is clearly the ultimate measure. Regardless of his form, if he hits safely often, he is considered a good batter. This allows for the acceptance of unconventional batting behavior, the awkward but effective batter, although it is expected that batters with good coordination and form are more likely to have high batting averages in general.

One step toward assessing administrative effectiveness is to weight these goals in terms of their desirability, with the top ones rated highest. Those administrators who achieve the most desirable goal should get the highest score. Weights corresponding to importance can be assigned by the use of expert judges. Each goal is described and put on a separate card. Judges are then asked to classify them according to their relative importance on a nine-point scale. The mean of judges' ratings is used as the importance weight for that goal.

Accountability. As mentioned above, measurement must be realistic with respect to varying external circumstances within which the administrator functions. There are at least two ways in which this can be taken into account.

When considering the effectiveness of a principal, all districts with characteristics similar to those of principal A can be considered as a unit and the mean effectiveness score computed. This would provide an estimate of how an average principal would function in that situation. Any deviation from the mean score could be considered a function of the principal's own behavior. This measure would take account of the difficulty of the job.

A parallel measure, obtainable directly from respondents, is obtained by asking them to rate the performance of the principal relative to the job difficulty and relative to how other administrators could have done it. A sample item:

Under the circumstances, the principal achieved the cooperation of the community

1. no better than the worst possible principal could
2. not much better than the worst possible principal could
3. definitely not as well as the average principal could
4. slightly worse than the average principal could
5. as well as the average principal could
6. slightly better than the average principal could
7. definitely better than the average principal could
8. almost as well as the best possible principal could
9. as well as the best possible principal could

Summary of Measures of Effectiveness. These two measures could then be compared and a final figure derived to indicate the degree to which the principal did a better or worse job than an average principle. Thus, the final rating for an administrator on any given goal is: $I \times E$, where I = importance of the goal, E = effectiveness with which the goal is being attained compared to what other administrators could do in the same situation. The best score is given to an administrator who achieves the highest possible effectiveness rating on a highly important goal, in a situation where few, if any, other administrators could have accomplished this. The total administrative effectiveness score is the sum of these, $\Sigma(IE)$ over all effectiveness measures. This score reflects how well the administrator did, how difficult his job was, and how important each function is.

Table 17

Computation of Total Administrative Effectiveness

Score for Hypothetical Example

Goal	I	Relative E	PAI
Academic achievement	9	5	45
Emotional adjustment	8	6	48
Community cooperation	5	8	40
Teacher cooperation	7	4	28
Interpersonal relations with students	5	5	25
Decision-making methods	4	3	12
		Total	198
		Best possible rating	342

(Assume E=9, for all goals)

% of best performance 58

(All scores range from zero to nine)

Thus the effectiveness score, the total PAI, may be expressed either in terms of absolute performance (198) or performance relative to the best possible performance (58%).

Computation of E can be done either by comparison of absolute effectiveness rating with all others in similar situations, or by direct use of the comparative questions described above. Either way, E reflects both the quality of the performance of the administrator and the difficulty of the job.

Table 18 presents a list of all criteria of administrative effectiveness mentioned above, along with the method of measurement. Each criterion may be used separately for a given purpose, or the criteria may be ranked by selection committees according to their relative importance for the administrator and job at hand. Also, the "universal" relative importance of each criterion may be decided in a consensual way by having "experts" give rankings of relative importance to each criterion.

For either of the last two methods a composite single rating may be obtained by summing the product of the importance and the effectiveness rating for each criterion as described above. The same procedure may be used to obtain sub-scores by computing sums for a sub-set of criteria.

Table 18

Summary of Measures of Administrative Effectiveness

	Criterion	Measure	Method
1.	Student's academic achievement	Achievement divided by IQ	Objective Test
2.	Student's emotional adjustment	Subjective evaluation	Guidance counselors
3.	Student's social adjustment	Delinquency, truancy, discipline, job success, social acceptance	Records and sociometric status
4.	Student's physical health	Physical condition, freedom from disease and injury	Medical records
5.	Community cooperation*	Pass bonds, adequate taxation, citizen participation,, aiding children at home	Election records, records of citizen participation
6.	Community motivated, guided and given opportunity to cooperate*	Perception of school interaction (PSI) questionnaire for parents.	Questionnaire taken by administrator and all interactors
7.	Teacher effectiveness	Selection prodedures, professional recognition	Subjective judgment, records
8.	Teachers motivated, guided and given opportunity to attain excellence *	Perception of school interaction questionnaire for teachers	PSI taken by administrators and all interactors
9.	Administrative efficiency of school **	PAI-Job scales	PAI-Job taken by administrators and all interactors
10.	Facilitative staff motivated, guided and given opportunity to perform most efficiently *	PSI questionnaire for facilitative staff	PSI taken by administrator and all interactors

Table 18 (continued)

	Criterion	Measure	Method
11.	Student cooperation	Attendance, voluntary academic activities	Records, subjective judgment
12.	Students motivated, guided and given opportunity to perform most efficiently *	PSI questionnaire for students	PSI taken by students, administrator and all interactors
13.	Sound decision-making **	Administrative decision-making scale	Taken by all administrators and all interactors
14.	Administrative skill**	Administrative skills scale	Taken by administrator and all interactors
15.	Technical knowledge *	Test of administrative information	Taken by administrator
16.	Interpersonal effectiveness with community **	Use of PAI scales to measure trait, personal, and relational satisfaction	PAI scales taken by administrator and all interactors
17.	Interpersonal effectiveness with teachers**	Use of PAI scales to measure trait, personal, and relational satisfaction	PAI scales taken by administrator and all interactors
18.	Interpersonal effectiveness with facilitative staff *	Use of PAI scales to measure trait, personal and relational satisfaction	PAI scales taken by administrator and all interactors
19.	Interpersonal effectiveness with students *	Use of PAI scales to measure trait, personal, and relational satisfaction	PAI scales taken by administrator and all interactors

The measures denoted by ** were used in the present pilot study, with the exception of the relational satisfaction measures which were not used in this study. Work is now in progress to develop means of assessing the criteria indicated by *.

Test of Compatibility Hypothesis

Interpersonal Behavior

One possible determinant of a teacher's or parent's rating of a principal's effectiveness may be the success of their interpersonal relation. If the principal satisfies the needs of the interactor and allows the interactor similar gratification, it seems likely that the interactor will be well disposed toward the principal.

The method of computing compatibility has been described in detail by Schutz (1958, p. 105) and is also discussed above in terms of relational satisfactions. The instrument used for this analysis is FIRO-B. Data on the reliability, also described in Schutz (1958, p. 57), and validity of this instrument as well as all others used in this study are presented in Appendix B.

The FIRO-B (Fundamental Interpersonal Relations Orientation--Behavior) test is designed to assess the respondent's general present behavior in the areas of expressed and wanted inclusion, control, and affection. It is made up of six nine-item scales. The subject receives six scores, representing the amount of behavior he says he expresses or wants in each interpersonal area. His score on each scale lies between 0 and 9.

Representative items for each scale follow:

Expressed Inclusion	1. I try to be with people. 2. I tend to join social organisations when I have an opportunity.
Wanted Inclusion	1. I like people to invite me to things. 2. I like people to ask me to participate in their discussions.
Expressed Control	1. I try to take charge of things when I am with people. 2. I try to influence strongly other people's actions.
Wanted Control	1. I let other people decide what to do. 2. I am easily led by people.
Expressed Affection	1. I try to have close relationships with people. 2. I try to be friendly to people.

Wanted Affection
1. I like people to act close and personal with me.
2. I like people to act friendly toward me.

For each item, the subject is asked to choose one of the following:

1. usually 2. often 3. sometimes 4. occasionally 5. rarely 6. never

or, for some items:

1. most people 2. many people 3. some people 4. a few people 5. one or two people 6. nobody

Cutting points on these scales for each item have been determined on previous samples of subjects by Guttman scaling. Thus, some items may be scored if the subject chooses "usually," "often," "sometimes," or "occasionally," while for others only a choice of "usually" may be scored, depending upon the empirically determined cutting point.

Results. Results of the pilot test of the compatibility hypothesis with respect to interpersonal behavior are summarized below over all types of compatibility. The correlations given (in parentheses) are all significant at the .05 level or better. The number of subjects entering into any one correlation ranges from 75 to 150 for teachers, and 60 to 210 for parents, for all compatibility results reported.

For explication of the scales entering into each correlation, see Appendix A.

1. When the principal and the teacher provide mutual satisfaction with respect to including and excluding the other (rK^I), the teacher feels that the principal is poor in administrative skill (.26, Admin.) but likes him (.21, EAF).

2. When the principal and the teacher have a mutually satisfactory relation with regard to who is the dominant one and who is submissive (rK^C), the teacher feels that the principal is a poor administrator generally (.17, Job).

3. When the teacher and principal have a mutually satisfactory relationship regarding affection (rK^A), the teacher feels the principal is poor in providing educational leadership (.23, ECF), but he likes the principal (.18, EAF).

4. When principal and teacher are compatible with respect to which one originates and which one receives control in their relation (oK^C), the teacher rates the principal high overall (.23, Rating), and is satisfied with the amount of authority assumed by the principal in school policy matters (.17, T-CB).

5. When principal and teacher are compatible with respect to originating and receiving affection, then the teacher is satisfied with the amount of affection shown by the principal to the teacher (.18, T-AF).

6. If principal and teacher are compatible with regard to the amount of contact they want with people, then the teacher likes the principal (.17, EAF).

There were no relations with parents significant at the .01 level, probably a reflection of the fact that the compatibility measures require a reasonable amount of contact between interactors, at least as much as the teacher has with the principal and more than most parents have.

Intelligence

The rated effectiveness of a principal may also be correlated with the similarity of his intellectual ability to that of the parent or teacher who is rating him. If a principal is highly intelligent, he may be rated higher by a teacher or parent who is equally intelligent than he would be by a less intelligent parent or teacher. Similarly, a highly intelligent parent or teacher may be more likely to give a low rating to a less intelligent principal than would a low intelligence parent or teacher.

In selecting a test of intelligence it was considered important to find one that would measure separately various aspects or factors of intelligence. For example, verbal fluency might be more important for the administrator than mathematical reasoning ability, or vice versa.

With this in mind, the Thorndike Intelligence Examination, Form BB, plus the IER Word Knowledge Test were selected for administration to the first pilot groups. This combination of tests gives separate scores for three factors: general information, arithmetic reasoning, and vocabulary. For an already lengthy battery, however, this combination of tests requires too much time. After further searching, a short, 20-item vocabulary test called the Vocabulary Test GT was substituted for the IER. (We would like to express our appreciation to the late Professor Irving Lorge for assistance in recommending and providing thest tests.) Results of the shorter test are highly consistent with those of the longer one. Further, a special version of the BB was constructed, consisting of fewer subsections of the original, but retaining the general information and arithmetic reasoning scores separately. This shorter (about 30 minutes) three-factor combination was used for the later pilot groups.

Similarity of the administrator to the people with whom he works is computed for each of the three intelligence subscores and compared with his effectiveness scores.

Results.

1. Parents who have vocabulary scores similar to the principal's do not respect his competence (.26, ECF) and are dissatisfied with his behavior toward them in the area of affection (.25, P-AB).

2. Parents who are similar in general information to their principals feel that the principal is a good general administrator (.41; 1,2,3,4).

3. If teachers and principals are similar in arithmetic reasoning ability, the teacher does not feel much affection for the principal (.32, EAF), lacks respect for the principal's competence (.30, ECF), and is dissatisfied with the principal's affection behavior (.55, T-AB).

Cognitive Style.

Recently there has been a great deal of interest in the way people perceive the world and attempt to come to terms with it. There seem to be identifiable cognitive styles which may be looked upon as a supplement to interpersonal orientations (the relation between the two is discussed below in the section on interpersonal symbolism). Another possible contributor to the rating of administrators is the similarity of cognitive styles of principal and interactor.

The Myers-Briggs Type Indicator was selected as a measure of "cognitive style," or intellectual approach to the world. The instrument was constructed by Isabel Briggs Myers and Katherine C. Briggs and is handled by the Educational Testing Service.

Selection of this particular instrument was influenced by its success in differentiating occupational groups in studies performed at the Institute of Personality Assessment and Research at the University of California, Berkeley. It has been extremely successful in measuring variables that appear to contribute to success in one field of endeavor as opposed to another. The dimensions it measures may thus be important predictors of success in a field like educational administration.

The MBTI comprises four independent bipolar scales corresponding to four pairs of "Types" or orientations toward the world. The scales are defined as follows:

1. Extraversion-Introversion (E-I). This scale indicates whether one's main reference point is external (E) or internal (I). A high E score indicates that one's sources of value and enjoyment are external, while a high I score indicates that one's sources of value and enjoyment are internal.

2. Intuition-Sensation (N-S). This scale defines the approach a person habitually takes to perception--the way in which he prefers to become aware of something. The intuitive (N) type uses unconscious cues, associations, hunches, and "creative" ideas; he prefers a figurative, imaginative, and unique reading of the world. In contrast, the sensory (S) type relies more heavily on direct use of the five senses and prefers a literal, factual, and conventional reading of the world.

3. Feeling-Thinking (F-T). This scale measures the way in which one habitually judges information to arrive at a conclusion. The thinker (T) judges primarily by rational or analytic means, basing his conclusions on logical evidence of truth or falsity; thus his judgments and decisions are mediated by rationality and judiciousness. The feeler (F), on the other hand, judges primarily by appreciation of feelings or values, drawing conclusions based on sympathy or antagonism between his own and others' values and feelings; thus his judgments and decisions are mediated by compassion and emotion.

4. Judgment-Perception (J-P). This scale is based on the premise that "every time you use your mind for any purpose whatever, you perform either an act of perception (becoming aware of something) or an act of judgment (coming to a conclusion)." The judging (J) type is concerned primarily with conclusions, while for the perceiver (P) the act of becoming aware is more important. Thus the judging type creates an ordered and anticipated world, preferring to act from pre-formed notions, whereas the perceiving type enjoys a casual, changing world, preferring to act immediately and spontaneously.

The test is made up of 166 forced-choice items. Two (occasionally more) responses are offered the respondent for each item, one of which contributes to one end of a scale, one to the other end. Following is a sample of items from each scale:

1. Do you think the people close to you know how you feel

(Extraversion)	a. about most things
(Introversion)	b. only when you have some special reason to tell them

2. Would you rather be considered

(Sensation)	a. a practical person
(Intuition)	b. an ingenious person

3. Which of these two is the higher compliment?

(Feeling)	a. He is a person of real feeling.
(Thinking)	b. He is consistently reasonable.

4. Are you at your best

(Perceiving)	a. when dealing with the unexpected
(Judging)	b. when following a carefully worked-out plan

Some responses are given weights of 2, a few are not scored, and the rest are counted 1 on the scale to which they belong. Separate scores are obtained for each pole of the four scales, giving eight scores. In addition, the position on each scale is obtained by subtracting the smaller from the larger of each pair (e.g., if I is 15 and E is 10, position on the scale is 5I, or five points in the introversion direction). Finally, the respondent falls into one of the 16 possible "types," depending upon his highest score of each pair. Thus, he may be an ESTP type, INTJ, etc. This typology, however, was not used in the present study.

Results.

1. If teacher and principal are similar on extraversion, then the teacher is satisfied with the principal's feelings about the teacher's competence and has a high evaluation of the way the principal solves problems (.28 PS).

2. If they are similar in the extent to which they use an imaginative approach to the world, the teacher has a high evaluation of the principal's over-all administrative ability (.20 Admin).

3. If the pair are similar in the degree to which they place reliance on rationality (T), then the teacher is satisfied with the principal's feelings about teacher's competence (.22 T-CF) but dissatisfied with the participation he is allowed in school activities (-.20 T-IB).

4. Similarity in placing reliance on feelings (F) in coping with the world leads the teacher toward a low evaluation of the principal's ability to communicate (.25) and low satisfaction with his inclusion behavior (.19).

5. Similarity with respect to whether or not the parent and the principal impose order on the world or prefer more casual spontaneous behavior goes along with respect for the principal's abilities (.15) and liking for the principal (.17) by the parent. This is the only scale on which parent correlations were higher than teachers'.

Coping Mechanisms

In the study of human interaction the investigation of the characteristic ways in which people avoid anxiety or exposure has become increasingly important. In much psychological theory it is assumed that there are difficult and threatening aspects of everyone's personality--such things as feelings of inferiority, impulses to hostility, feelings of inadequacy, feelings of insignificance, and strong lusts and desires. Much of human activity is spent in preventing others from learning about these parts. Further, they are often hidden from the person himself. Thus, in the course of human development, techniques are evolved for avoiding or distorting such feelings. These techniques are usually called defense or coping mechanisms and are thought to be necessary to some degree in order to maintain effective functioning. Further, some theorists feel that defenses so fully color the ways in which people present themselves to the world that they constitute the main basis for liking or disliking people. With this in mind, a knowledge of which particular coping mechanisms are used by an administrator might prove very important in understanding his relations with others.

Theorem. The perception and evaluation of an administrator made by an interactor (a person with whom he has significant interaction) will be a function of the interaction of the coping patterns of the administrator and the interactor.

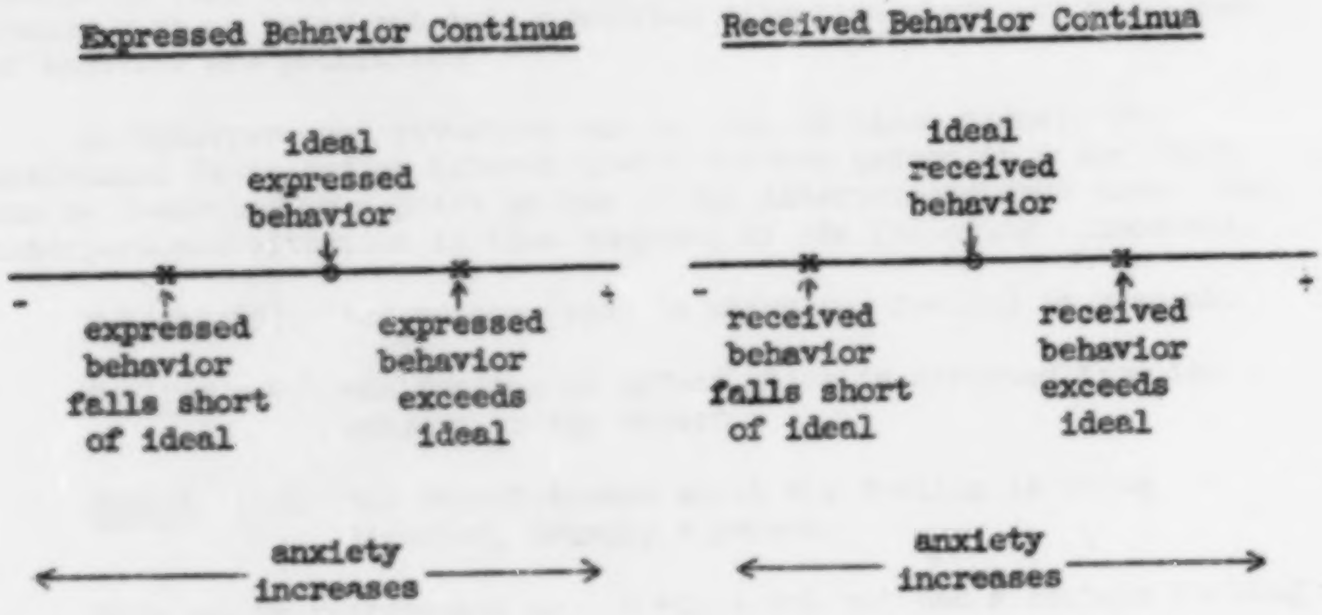
Explanation. Before explaining the theorem in more detail, it is necessary to describe a coping mechanism and the theoretical framework from which the theorem stems (for a more detailed discussion, see Waxler, 1959).

When interpersonal needs are unfulfilled in an interpersonal situation, such as the one in which the school administrator finds himself, anxiety results. The individual can deal with this anxiety by developing and using certain habitual protective techniques--the defense, or coping, mechanisms. These habitual protective mechanisms are a significant aspect of the individual's personality and serve as (1) important components of his own behavior and (2) significant data used by others to react to him.

The structure of the FIRO theory of interpersonal needs suggests a useful paradigm for anxieties and coping mechanisms. The theory postulates that the three basic interpersonal needs of inclusion, control, and affection must be satisfied, where satisfaction implies both an optimum expression of a certain kind of behavior (expressed) as well as an optimum receipt of this behavior from others (wanted). Each of these needs can be represented as two continua: one continuum for the expression of the need-related behavior and one for the behavior received from others in this same area. According to the demands of a particular interpersonal situation, there is an ideal behavior, namely, that behavior which is consistent with one's self concept. Discrepancies between actual and ideal behaviors, then, can result in anxiety as shown in Figure 1.

Figure 1

Sources of Anxiety


Expressed Behavior Continua
ideal expressed behavior
-
+
expressed behavior falls short of ideal
expressed behavior exceeds ideal
anxiety increases
Received Behavior Continua
ideal received behavior
-
+
received behavior falls short of ideal
received behavior exceeds ideal
anxiety increases

It is this discrepancy between actual and ideal behaviors which results in a feeling of threat or anxiety in the individual. These kinds of anxiety situation are the ones against which defenses must operate.

Examples of the type of anxiety-arousing situation shown at the left would be:

1) An administrator would like to be democratic in his relations to teachers (expressed control), but he behaves very autocratically.

2) An administrator would like to be very close and personal with teachers (expressed affection) but finds that in his job he acts very impersonally.

Examples of the type of anxiety-arousing situation shown at the right would be:

1) An administrator would like to be invited to PTA meetings and other parent activities (wanted inclusion) but has not been asked.

2) A superintendent wants the principals to make most of the decisions regarding their school program (wanted control), but they won't do this.

Thus, anxieties arise from a discrepancy between ideal behavior or feelings and the behavior or feelings of the individual in the present situation. The unsatisfactory present behavior can either be caused by some compulsion inside the person or some external circumstance such as being put into a working situation where certain types of behavior are prohibited.

An interpersonal situation can be seen in these terms: The individual feels and/or behaves toward another person in a way which can be described by a point on one of the interpersonal need axes. The interpersonal situation is thus composed of the following components:

Subject (S):	the person (ego) in which the feeling is present.
Feeling (→):	the feeling or affect which is directed from the subject to the object.
Object (O):	the object toward which the feeling is being directed, usually a person.

This can be represented as: S→O, a subject has a certain feeling toward an object.

There are several types of defense, or coping, mechanisms; that is, several means by which the discrepancy between the ideal and the real situation is narrowed by distorting the situation such that the self feels that the actual situation is really different and, in particular, closer to the ideal. In order to alter or distort the situation, any one or more of the components of the interaction schema (the subject, the feeling, or the object) can be changed. This alteration or distortion is considered to be the function of a coping mechanism. It is "defensive" because the original feeling toward the original object is not comfortable and, instead, a change in the S→O schema is brought about so that temporarily the feeling can be handled in some way.

There are certain common characteristics which allow a general classification of coping mechanisms. This classification is accomplished by the method of substruction, that is, by listing all the ways in which the major areas (S, →, O) can vary and then generating all possible combinations of these values (see Table 20).

TABLE 19

Values of Basic Elements of Interpersonal Situation

The Subject can be: 1. the self
2. another object

The Feeling can be: 1. denied (not dealt with)
2. isolated (present but ignored or not important)
3. altered
4. expressed without alteration

The Object can be: 1. the original object
2. a substitute object
3. the self

TABLE 20

Substruction of Coping Mechanisms

FEELING

		FEELINGS NOT EXPRESSED		FEELINGS EXPRESSED	
SUBJECT	OBJECT	DENIED	ISOLATED	ALTERED	NOT ALTERED
SELF	OTHER	11 Denial	12 Undoing Intellectualization Isolation Rationalization	13 Reaction Form. Reversal Overcompensation	14 Non-defensive
	SUBSTITUTE OTHER	21 (Denial Displacement)	22 (Isolation Displacement)	23	24 Regression Displacement
	SELF	31 Denial	32 (Isolation)	33 Identification with aggress.	34 Introjection Turning against self
OTHER	OTHER	41 (Projection)	42 (Projection)	43 (Projection)	44 Projection
	SUBSTITUTE OTHER	51 (Projection)	52 (Projection)	53 (Projection)	54 Projection
	SELF	61 (Projection)	62 (Projection)	63 (Projection)	64 Projection

The feelings in the S→O schema can be treated in four different ways, as the substruction indicates. These are defined more fully below:

> Feelings denied. The subject disclaims the existence of the object in reality or of the feeling toward an object; no new S→O schema is substituted for this denied one.
>
> Feelings isolated. The original S→O schema and the feelings are not repressed, but instead the emotional connotation of the schema is separated from the cognitive meaning; thus the S→O discrepancy is felt in a sense, but this feeling is ignored or not considered of any importance.
>
> Feelings altered. The content of the affect toward an object is altered; it may be reversed, partially reversed, or replaced by another feeling.
>
> Not altered. The content of the feelings in the original S→O schema is not changed.

Although Table 20 presents all possible combinations within this framework, it is not necessary to use all of them for a useful study of defenses. In particular, certain of the most common defenses may be chosen to be fairly representative of the entire table. These are denial, isolation, intellectualization, regression, projection, and turning-against-the-self. By considering individuals with different habitual defenses interacting with each other, we may derive various hypotheses about the administrative situation. For example, is an administrator who uses denial evaluated as effective by a parent who prefers projection?

Patterns of defenses. What combinations of defense patterns should result in what type of behavior or feelings between people in the administrative situation? What is important in determining how types of defenders will interact--whether their expectations will be complementary or not? The substruction of defenses may be used to see how the defenses are classified and how the resulting differences in definition may be carried out into overt or symbolic behavior and into expectations about others' behavior. First these representative defenses will be described.

The isolator handles feelings by removing them from the idea or content of the behavior and going ahead to deal with anxiety in an intellectual manner or in a way which is devoid of feeling. From this characteristic we might assume that he would be willing to handle any feelings, his own or others', providing he can deal with them in this way. However, his expectation is that in any situation, threatening feelings are best dealt with as ideas rather than as emotions.

The individual who prefers regression as a means of handling unacceptable feelings changes himself, or alters his own role, to accord with a more satisfactory dependency. In order to play this subordinate role and to receive the satisfaction which it gave him originally, he expects that others will take the superordinate role which complements it.

The projector deals with his anxiety by attributing his feelings and motives to some object in the environment. This allows him to externalize his feelings so that he can attack them with less threat to his internal organization. In this sense, then, his expectations of how the other person in the situation behaves is most important. If that individual behaves according to his perception (e.g., as the source of aggression or hostility), then his distorted perception is verified.

The denier is unwilling to handle any aspect of certain feelings. Any situation which brings up these unacceptable feelings, or any individual who expects the denier to deal with the feelings, asks for behavior which is threatening to his most acceptable view of himself.

The individual who uses turning-against-the-self as a defense handles his unacceptable feelings by changing the object of the feelings from another object to himself. In order to support this distortion, his expectations of others require that they perceive these feelings in him also and behave in a way which is appropriate to this perception.

Two concepts seem to be important in understanding whether types of defenses will complement each other in an interpersonal situation. One of these concepts is "expectation"; the other is "atmosphere." We have said that regressors, in defending against anxiety, alter their role and expect that another individual will play the complementary role. Isolators expect that the atmosphere in interaction will be one in which feelings are dealt with intellectually; thus isolators are most comfortable in a group which has agreed-upon norms for behavior. Perhaps these two concepts are important in considering how all kinds of defenders will interact with each other.

It should be indicated here that the ideas about expectations and atmospheres of interaction situations for specific defenders are not directly deduced from the classification of defenses itself. Instead, these ideas seem to be implied by the basic attributes of defense. A change of objects implies that the defender expects the new object to verify his misperception. A change of the self implies that one's altered role must be supported by a complementary role. A change in quality of feelings implies that this change be recognized in the interaction situation by the other member who behaves in accordance with the alteration. Thus, each of the types of distortion tends to carry with it a complementary expectation.

The "expectation" concept seems to describe best the problems which the "subject and object change" defenders find in interpersonal behavior. Each of these defenders expects that the object toward which his feelings are directed will carry out the expected behavior and thus support the defender's misperception. The "atmosphere" or "norm" concept seems best to describe the kind of problems that defenders who alter the quality of their feelings find in interpersonal behavior (i.e., the deniers, isolators). In this case it is not the other individual who is expected to directly support certain misperceptions; instead, agreement on the way in which feelings should be handled is important.

Complementary expectations between types of defenders can be exemplified by the projector and turning-against-the-self defender: The projector says, unconsciously, "You are the one who is anxious or hostile (and I expect that you will behave that way)," while the turner-against-self says, "I am anxious and hostile (and I expect that you will treat me accordingly)." Thus, the two expectations are mutually supportive. Agreement on atmosphere is exemplified by two deniers: the first one says, "I do not want to talk about how I feel," and the other says, "I do not want to talk about how I feel." They have agreed upon a group norm and thus have set certain bounds on the interaction and can go on together satisfactorily. Perhaps the concept of atmosphere or norm-agreement is only a special case of role expectation, but it seems useful to keep it separate at this point.

Hence, certain classifications of defenses imply certain expectations for the behavior of others; what kinds of effects will the complementarity or non-complementarity of these expectations have upon interaction? Which types of defenders' expectations actually mesh? Perhaps if each defense meshed with the other, then the two defenders involved would continue interaction over a period of time rather than break off the relationship.

Table 21 summarizes the above remarks about defense compatibility.

Table 21

Roles and Expectations Resulting from Defense Mechanisms

	Defense	His Role	The Expected Role
1.	Isolation	Isolates feelings, handles them as ideas; any feelings expressed in the situation should be handled this way	Expects the other to isolate also or to allow him to take the lead and handle the situation in his characteristic way.
2.	Regression	Takes the dependent role, as in the earlier parental relationship.	Expects the other to take the superordinate role in order for the dependency to be satisfied.
3.	Projection	Perceives anxiety, unacceptable feelings in others.	Expects the other to accept this feeling and behave accordingly.
4.	Denial	Does not deal with unacceptable feelings.	Expects the other member to limit the situation feelings also.
5.	Turning against the Self	Unacceptable feelings are directed toward the self.	Expects other s to support this perception by behaving as if it were true.

While the defense of intellectualization is not listed here, we would expect its characteristics to be the same as isolation since they are defined in the same way on the substruction.

Beginning with the above assumptions, how would the various combinations of defenders be characterized? Following are some examples of the reasoning behind the derivation of hypotheses about coping compatibility.

Isolator-Isolator. Each of the isolators wants to handle feelings by intellectualizing or rationalizing and expects that the other will handle an anxiety situation in the same way so that threatening feelings need not be dealt with. Since each agrees on this means of handling the problem, we would expect that their interaction would be positive.

Projector-Projector. Each of the projectors handles his unacceptable feelings by externalizing them--by attributing them to the other individual. This results in an expectation that the other member will behave in accordance with the projected feelings. Since neither is willing to handle the feelings nor to behave as if he had them, we would expect the combination to have negative interaction.

Regressor-Regressor. The regressor handles his feelings by altering his role to an earlier one which is more dependent. Since this dependent role implies that another role is superordinate, the regressor expects that the other member will take the leading role in handling the situation. Two regressors, each taking the subordinate role, will not have their expectations filled and therefore will have negative interaction.

Isolator-Projector. The isolator expects that the other will agree on the way feelings should be handled--dealing with them intellectually. The projector expects that the isolator will behave in a way which is indicative that he has and is dealing with the unacceptable feelings which the projector has externalized. The projector's expectations are fulfilled in that the isolator does indicate that he is dealing with the feelings, since he is able to discuss them intellectually. The isolator's expectations are fulfilled in that he is allowed to handle his own anxiety by rationalizing or intellectualizing. Therefore the interaction is positive.

Isolator-Regressor. The regressor expects that his dependent role will be complemented by the opposite superordinate role; he is willing to deal with the anxiety problems, however, if he has "help." The isolator is willing to deal with the problem also if he can do it in an intellectual way. The isolator is willing to take the lead in the pair since this allows him to control the way in which the problem is handled. The regressor is willing to follow since this gives the regressor his satisfactory dependent position. The result of the interaction would be positive.

Projector-Regressor. The regressor will deal with the anxiety feeling but only when in a dependent role. The projector will also deal with the anxiety feeling when it is externalized to some other object. Since the regressor is willing to accept the feelings and the projector is willing to deal with them if they are in the regressor, each of their expectations is fulfilled and interaction would be positive.

Other predictions about all possible combinations of defenders are summarized in Table 22, where positive and negative interaction are designated by a plus or minus.

Table 22

Summary of predicted positive and negative effects on interaction of all possible combinations of six defense types

	Dom	Isol	Proj	Regr	T/S	Intell
Do	+	-	-	-	-	-
Is		+	+	+	+	+
Pr			-	+	+	+
Re				-	-	+
Ts					+	+
In						+

Two principles are implicit in the predictions summarized. The first of these is the principle of complementarity which is applied to the role expectations of defenders. The regressor expects that the other group member will take the complementary role to his preferred dependent one. The second principle is the principle of agreement. In this case the group members each agree on the same means of handling the interpersonal relationship; for example, each of the isolators will be most satisfied in a group in which the norms call for an intellectual means of handling problems.

Measurement. The COPE (Coping Operations Preference Enquiry) test has been developed to measure the relative preference of the respondent for each of the coping mechanisms in order that the above hypotheses can be tested.

To develop the test, situations were derived to describe all the types of interpersonal anxiety possible within the above framework: too much and too little inclusion, control, and affection.

There are six possible anxieties related to an individual's own behavior toward others and six related to other people's behavior toward the self. In addition, all six anxieties can occur for feelings as well as behavior. These are schematized in Table 23.

Table 23

Types of Interpersonal Anxieties

	Me toward others		Others toward me	
	Behavior Level	Feeling Level	Behavior Level	Feeling Level
Inclusion				
Control				
Affection				

Since in each area there can be anxiety resulting from having too much or too little of the commodity at issue, this makes 24 possible anxiety sources:

Self toward other behavior

Too much:

Inclusion--I'm with people too much.
Control -- I'm too dominating.
Affection--I get too personal.

Too little:

I - I don't mix with people enough.
C - I'm not decisive enough.
A - I'm too cool and aloof to people.

Other to self behavior

Too much:

I - People don't leave me alone--give me privacy.
C - People boss me around too much.
A - People get too personal with me.

Too little:

I - People don't pay enough attention to me (ignore).
C - People don't help me enough (tell me what's expected).
A - People don't act personal enough to me.

Self to other feelings

Too much:

I - I respect everyone's individuality too much.
C - I respect everyone's competence too much.
A - I like people too much.

Too little:

I - I don't respect people as individuals enough.
C - I don't trust people's abilities enough.
A - I don't like people enough (can't express affection).

Other to self feelings

Too much:

I - People feel I'm too important.
C - People respect my abilities too much.
A - People like me too much.

Too little:

I - People don't feel I'm significant.
C - People don't respect my abilities.
A - People don't like me enough.

All of these serve as possible sources of anxiety. For each anxiety the coping mechanisms could be explored. The instrument developed explores only coping mechanisms used to handle the first six, i.e., self-to-other behavior.

Development of measure. For each anxiety a hypothetical situation is presented in which that anxiety is evoked and to which the subject must respond with defense preferences. Within each of these problems, all the components of the anxiety paradigm are presented to the subject. The *actual behavior* (A) situation is described in terms of one of the end-points of the dimension (the "under" or "over" aspects of e^{IB}, e^{CB}, or e^{AB}). We have attempted to describe only the kind of behavior associated with one dimension, so that subjects will respond only to that specific area of anxiety. For example, for the inclusion problem and the "overactive" type the behavior described includes "joining" and "including" but does not deal with control or affection.

To this statement about a specific type of behavior on the part of the hypothetical individual is added his feeling of dissatisfaction because his behavior differs from his *ideal behavior* (I). For example, the person behaves in a way which is underpersonal but would feel more comfortable if he behaved in a way which was less underpersonal.

An example of one of the anxiety problems is included here to indicate how the theoretical paradigm of anxiety is utilized in drawing up our anxiety problems:

Statement of actual behavior on the e^{I} dimension, the "overactive" pole.	Your friend, Allen, has just come to you and said, "Just yesterday something happened to make me feel disturbed. You know how I usually do everything together with other people--when I do something, I include other people, and when others are doing something, I join them.

Statement of ideal e^I behavior, with an indication of discrepancy from the actual behavior.	"Well, yesterday when a group of my friends came around to ask me to go out with them, I suddenly realized that I really didn't want to go--but I went anyway. Actually, I think that I might enjoy myself more if I didn't always join people--if I spent more time by myself.
Statement of dissatisfaction and feelings.	"I've felt quite concerned about this ever since it happened. What do you think about it?"

At this point in the test form, the respondent, putting himself in the place of Allen's friend, is given the alternatives from which he must choose. These alternatives, the defense items, are described in the next section.

The theoretical definition of anxiety thus serves as the paradigm from which the anxiety problems on the test are drawn. Both the actual and the ideal behaviors are described in the problem, and the discrepancy between them is explicitly stated. The individual's feeling of dissatisfaction or anxiety is also included in the sentence: "I've felt quite concerned about this problem ever since it happened." "Concern" seems to connote feeling which is neither extremely strong nor extremely weak. The fact that feelings are described eliminates the possibility that the "friend" described has already removed the affect from the anxiety feeling and can report his problem without any emotion. Without the addition of the statement of feelings, we might assume that the subject taking the test is responding to an anxiety against which a defense has already operated.

The defense items. The goal of accurate derivation from the theory was also the main consideration in developing the defense items. This point is most important since it gives the measure theoretical consistency. Other considerations involve reliability and ease in scoring. In using items instead of open-ended responses to the anxiety problems, we eliminate the problem of content-analysis of uncoded responses.

Each defense item is presented in the form of a direct quotation which answers the question, "He still appears to be concerned about this. How would you guess he really feels now?" Several considerations went into the translation of the theoretical definition of defense into an item on the test. These will be discussed for each of the item types.

Denial item. "I don't think you should feel this is a very important problem. I wouldn't worry."

Denial is defined as a lack of recognition of feeling toward a significant object. The item here involves a lack of recognition that the discrepancy between actual and ideal behavior occurs to any important extent. The "don't worry" aspect was added to the item to give this item the same supportive connotation as the other items.

Isolation item. "You may do too many things with other people, but this doesn't have much to do with your enjoyment of others."

Isolation is defined as a recognition of the discrepancy between actual and ideal behavior, but with denial of the affect which would ordinarily be a result of the discrepancy. In this item the problem is recognized but the emotion is disconnected from the anxiety; thus the discrepancy is not important to the individual.

Regression item. "You may do too many things with others, but with advice from someone more experienced you can change."

Regression is defined as an alteration in the ego itself to the point where an earlier role is taken. It is assumed that this earlier role is ultimately the dependent relationship with the parent. Therefore, our item for regression implies recognition of the anxiety and a statement of the need for help employing the use of a parent-figure who is more experienced; the item implies also that help will be forthcoming, indicating an expected dependency.

Projection item. "You may do too many things with others, but this is because other people expect you to."

Projection is defined as reversing the subject and object of the feeling. In the item the anxiety problem is accepted, but the motivating source of the behavior is perceived as being in the object rather than the subject.

Turning-against-the-self item. "You should realize that the fault for doing too many things with other people lies completely with you and with no one else."

Turning against the self is defined as changing the object of the feeling from another object, toward which affect cannot be expressed or felt, to the self. The item includes the change of object to the self. The item is constructed so as not to be perceived as a diagnostic response but, rather, as a way of dealing with anxiety--blaming the self rather than others who also may be available.

Intellectualization item. "You may do too many things with other people, but in present-day society one's whole life is oriented toward others."

Intellectualization is defined similarly to isolation; there is a recognition of the discrepancy between actual and ideal, but the feeling is denied or not considered important. In this item the feeling is isolated through a mechanism of generalization to others--"everyone" behaves or feels this way, and therefore any affect which would ordinarily be present in the individual is deemed unimportant because it is the modal feeling. In contrast to the other items, wording of the intellectualizing differs for each anxiety problem; however, the same type of mechanism is embodied in all of them.

The six defenses used in the test sample most aspects of the three attributes of defense. Three of the four types of feeling expression are represented; the fourth, alteration of feelings, was, in the early form of the test, also represented by a "reaction formation" item which was discarded because of difficulty in accurate wording. All the alterations in source of feelings are represented--the self, the altered self, and the other. Two of the three types of object are represented--the other and the self. The answer alternatives include items which represent the most varied types of defenses. Finally, the position of items under the problems were set in a 6 X 6 Latin square design so that item order would have no systematic effect on choice of defense. Preference for defense items is obtained through a ranking of items under each anxiety problem. Only the first two and the last two ranks are required, both because of the added time which a full ranking would take and because the middle ranks probably do not discriminate very well.

The fact that the anxiety stimulus is clearly defined and the defensive responses are provided for the subject might suggest that an intelligent and/or psychologically sophisticated subject would be able to "see through" the test to its purpose and skew his responses in one way or another. During the standardization process a question on the last page asked for comments from the subjects regarding the items from which they were to choose; the question read, "Did you have difficulty in understanding or choosing from the items provided?" Only one of 554 subjects indicated by his answer that he realized the items were defensive and that there was no "non-defensive" response provided. In informal discussions with other subjects taking the test, none indicated that he knew it was a projective one, much less that the items were defenses. Even if a subject were able to "see through" the questionnaire it seems reasonable to assume that his responses, selected from the series of defenses, would be valid since there is no obviously "right" answer and since he would probably select one appropriate to his unconscious defense choice.

In summary, the COPE was designed to be consistent with the interpersonal theory of defenses in order to allow us to test the theory with empirical data. It was also designed to meet the criterion of simplicity: it is quick and easy to administer, simple to score and easily and inexpensively reproduced.

Results. Several hypotheses from among those presented above were tested by correlating similarity on each COPE dimension with all criterion scores. The hypotheses tested are those on the diagonal of Table 22, namely, the situations where both teacher and principal, or parent and principal, had the same defense preference. Following are the significant correlations for each defense.

1. When the principal and teacher have the same preference for using the mechanism of denial, then the teachers rate the principal low on general administrative skills (.35). This may mean that teachers who are more aware of anxiety have respect for the competence of administrators who are well controlled.

2. Teachers who use the mechanism of isolation to the same degree as a principal give their principals a high overall rating and a high rating on administrative skill (.23, .34). This contrasts with opposite findings for denial. The result might be explained by the tendency of isolators to rely on verbalizing; principals who verbalize about anxiety-provoking situations are rated high by teachers who verbalize similarly. Similarly, parents who isolate rate principals who likewise are isolators high on their administrative skill (.34).

3. For both teachers and parents, similarity to the principal on projection goes with satisfaction with the principal's control behavior (.22, .19). For parents, this similarity also leads to satisfaction with the principal's inclusion behavior (.17) and liking for him (.16).

4. When parent and principal use regression similarly, the parent is dissatisfied with the principal's control and affection behavior (.14, .15).

5. When teachers are similar to the principal with respect to intellectualizing, the teacher is dissatisfied with principal's feelings of warmth toward teachers.

Educational Values

The values held by administrator and interactor, respectively, may contribute to the rating the interactor gives the administrator. Educational values are measured by the VAL-ED questionnaire described in the section on interpersonal symbolism. Difference scores on each scale of this questionnaire were correlated with each criterion measure.

Results. Because of the large number of significant relations, the results are presented in Table 24. The first column gives the VAL-ED scales on which similarity between teacher and principal, or parent and principal, is measured. The second column presents all the criterion measures which are significantly correlated with similarity on the VAL-ED scale. The final two columns tell whether it was the teacher or parent sample or both, that was correlated, and the direction and magnitude of the correlation.

Table 24

Relation of Similarity of Educational Values to Criteria Measures

Similarity on Val-Ed Scale	Criterion	Correlation For Teachers	Correlation For Parents
The school should teach the child to be accepted socially (SC-1)	...admire principal's competence (ECF)	.24	
	...satisfied by principal's feeling about their ability (Sat-CF)		.22
	...like principal (EAF)		.22
The school should develop the child's autonomy (SC-C)	...admire principal's competence (ECF)	.24	
	...like principal (EAF)	.35	.15
	...high overall rating of principal (Rate)	.19	
The school should encourage the child to express his affection feelings openly (SC-A)	...interactor's satisfaction with the degree to which principal takes an interest in him (Sat-IF)	.21	
	...interactor's satisfaction with the degree to which administrator likes him (Sat-AF)		.14
Teacher should treat all children equally (TC-1)	...admire principal's competence (ECF)	.28	
	...total ability on administrative tasks (Job)	.22	
	...interactor's satisfaction with the degree to which principal acts warmly and affectionately toward him (Sat-AB)	.21	

(cont'd)

Table 24 (continued)

Similarity on Val-Ed Scale	Criterion	Correlation For Teachers	Correlation For Parents
Teachers should control the child's classroom activities (TC-C)	...interactor's satisfaction with the degree to which administrator includes him (Sat-IB)	.28	
	...admire principal's competence (ECF)	.23	
	...interactor's satisfaction with the degree to which principal admires his competence (Sat-CF)	.25	
Teacher should express feelings openly to children (TC-A)	...interactor's satisfaction with the degree to which principal includes him (Sat-IB)	.34	
	...admire principal's competence (ECF)	.27	.26
	...total ability on administrative tasks (Job)	-.21	
	...interactor's satisfaction with degree to which principal admires his competence (Sat-CF)		.16
Administrator should include teachers on school activities (AT-I)	...admire principal's competence (ECF)	.26	.17
	...like principal (EAF)		.15
	...good instructional leadership (Ed Ld)	.24	
	...interactor's satisfaction with the degree to which principal acts warmly and affectionately toward him (Sat-AB)	-.25	

(cont'd)

Table 24 (continued)

Similarity in Val-Ed Scale	Criterion	Correlation For Teachers	Correlation For Parents
Administrator should retain complete authority over activities of teachers (AT-C)	...admire principal's competence (ECF)	.30	
	...interactor's satisfaction with the degree to which principal acts warmly and affectionately toward him (Sat-AB)	.20	
	...like principal (EAF)	.27	
Administrator should be personally friendly with teachers (AT-A)	...Admire principal's competence (ECF)	.24	.16
	...interactor's satisfaction with the degree to which principal assumes authority over him (Sat-CB)	.19	.17
	...interactor's satisfaction with the degree to which principal acts warmly and affectionately toward him (Sat-AB)		.17
	...like principal (EAF)	.26	.20
Teacher should join in community affairs (TCm-I)	...high overall rating (Rate)	.24	
Teacher should conform to community (TCm-C)	...interactor's satisfaction with the degree to which principal acts warmly and affectionately toward him (Sat-AB)	.29	
	...like principal(EAF)		.15
Teacher should become personally friendly with community members (TCm-A)	...interactor's satisfaction with the degree to which administrator admires his competence (Sat-CF)		.19

(cont'd)

Table 24 (continued)

Similarity in Val-Ed Scale	Criterion	Correlation For Teachers	Correlation For Parents
Administrator should never do anything that an important part of the community is against (ACm-C)	...admire principal's competence (ECF)		.18
Educators should treat with the whole child, not just his mind (Mind)	...admire principal's competence (ECF)	.26	
	...like principal (EAF)	.33	
	...high overall rating of principal (Rate)	.30	
Schools should concern themselves only with expert presentation of subject matter, not with pedagogic devices (Subj)	...interactor's satisfaction with the degree to which principal includes him (Sat-ID)	.27	

Summary: The results of this compatibility study may be summarized by considering each criterion separately, and listing the compatibility or difference scores that best predict that criterion. Each criterion is followed by the variables with which it is significantly correlated. A negative correlation means that the criterion goes with a difference in the predictor variable rather than a similarity.

Table 25

Compatibility or Similarity Scores that Correlate Best with Criteria

Criterion	Area of Compatibility or Similarity	Correlation With Teachers	Correlation With Parents
Overall rating of principal (Rate)	...educators should treat with the whole child not just his mind (Mind)	.38	
	...use of isolation as a defense (Is)	.23	
	...teachers should be involved in community affairs (TCm-I)	-.24	
	...school should encourage autonomy for children (SC-C)	.19	
Total administrative ability (Job)	...general information (Info)	.41	
	...imaginative reading of the world (H)	.20	
	...use of denial as a defense (De)	-.26	
	...teachers should express feelings toward child (TC-A)	-.21	
	...teacher should treat each child equally (TC-I)	-.22	
Technical administrative skill (Adm)	...use of isolation as a defense (Is)	.34	
	...use of denial as a defense (De)	-.35	
Instructional leadership (Ed Ld)	...administrators should include teachers in school activities (AI-I)	.24	

(continued)

Table 25, continued:

Criterion	Area of Compatibility or Similarity	Correlation With Teachers	Correlation With Parents
Problem solving ability (Solv)	...sources of value and gratification are in external things (E)	.20	
Feeling that the principal is competent (ECF)	...arithmetic reasoning ability (Reas)	-.30	
	...administrator should control teacher's activities (AT-C)	.30	
	...teacher should express feelings toward children (TC-A)	.27	
	...school should deal with the whole child, not just his mind (Mind)	.26	
	...administrators should include teachers in school activities (AT-I)	.26	
	...children should learn to be socially accepted (SC-I)	.24	
	...administrators should be personally friendly with teachers (AT-A)	.24	
	...should should develop the child's autonomy (SC-C)	.24	
	...teacher should control children's activities in the classroom (TC-C)	.23	
	...vocabulary (Voc)		-.26
	...administrator should never do anything that an important part of the community is against (ACm-C)		.18
	...creates an anticipated and ordered world; prefers to act from preformed notions (J)		.14

(continued)

Table 25, continued:

		Correlation	
Criterion	Area of Compatibility or Similarity	With Teachers	With Parents
Feeling of liking for the principal (EAF)	...school should develop the child's autonomy (SC-C)	.35	.15
	...school should deal with the whole child rather than just his mind (Mind)	.33	
	...administrator should control the classroom activities of the teacher (AT-C)	.27	
	...administrator should be personally friendly with the teacher (AT-A)	.26	
	...administrator should include teachers in school activities (AT-I)		.15
	...teacher should conform to community values (TCm-C)		.15
	...teacher should express feelings openly to children (TC-A)		.26
	...school should teach child to be socially accepted (SC-I)		.22
Interactor's satisfaction with the degree to which principal includes him (Sat-IB)	...teacher should express feelings openly to the children (TC-A)	.34	
	...teacher should control the child's classroom activities (TC-C)	.28	
	...school should concern itself only with expert presentation of the subject matter, not with pedagogic devices (Subj)	.27	
	...prefers figurative, imaginative, unique reading of the world (N)	.17	
	...judgments are mediated by rationality and judiciousness (T)		.15

(continued)

Table 25, continued:

		Correlation	
Criterion	Area of Compatibility or Similarity	With Teachers	With Parents
Interactor's satisfaction with the degree to which the principal assumes authority over him (Sat-CO)	...use of projection as a defense (Pr)	.22	.19
	...administrator should be personally friendly with teachers (AT-A)	.19	.17
	...use of Regression as a defense (Re)		-.14
Interactor's satisfaction with the degree to which the principal acts warmly and affectionately toward him (Sat-AO)	...arithmetic reasoning ability (Reas)	-.55	
	...teacher should conform to community values (TCm-C)	.29	
	...administrator should retain complete authority over activities of teacher (AT-C)	.20	
	...teachers should treat all children equally (TC-I)	-.21	
	...administrator should be personally friendly with teachers (AT-A)		.17
	...use of regression as a defense (Re)		-.15
	...use of denial as a defense (De)		-.15
	...vocabulary (Voc)		-.25
Interactor's satisfaction with the degree to which the principal takes an interest in him (Sat-If)	...school should encourage child to express feelings openly (SC-A)	.21	
	...use of projection as a defense (Pr)		.17

(continued)

Table 25, continued:

Criterion	Area of Compatibility or Similarity	Correlation With Teachers	 With Parents
Interactor's satisfaction with the degree to which the principal admires his competence (Sat-CF)	...judgments are mediated by rationality and judiciousness (T)	.22	
	...sources of value and enjoyment are external (E)	.21	
	...teacher should control the child's classroom activities (TC-C)	-.25	
	...administrator should inform community of policy and changes of policy (ACm-I)	-.29	
	...administrator should never do anything that an important part of the community is against (ACm-C)		.15
	...school should teach children to be socially accepted (SC-I)		.22
	...teacher should become friendly with community members (TCm-A)		.19
	...teacher should express feelings openly to children (TC-A)		.16
	...creates anticipated and ordered world, and prefers to work from preformed notions (J)		.23
Interactor's satisfaction with the degree to which the principal likes him (Sat-Af)	...use of intellectualism as a defense (In)	-.22	

Conclusion. Overall, the best predictors of the criterion measures were the interpersonal scales of the V/L-ED and the defense scales from COPE. In general the criteria related to task behavior of the administrator (Job, ECF, Adm, Ed Ld, Solv) were predicted best by defense and intelligence compatibility, as well as the similarity of educational values in the areas of inclusion and control. The criteria related more to interpersonal success (EAF, Sat-IF, Sat-AF, Sat-AB, Sat-IB) were best predicted by similarity of educational values in all three interpersonal areas, and again by defenses and intelligence.

Respect for the principal is related to a similar use of the isolation defense, and a similarly large vocabulary. Since isolation includes intellectualizing, these seem to indicate that a similar degree of verbal facility leads to a high regard for competence. On the other hand, denial as a defense and arithmetic reasoning ability operate in the opposite fashion. Here, opposites attract. It seems that people of this type admire the competence of others who have the opposite trait. The correlation coefficient is inadequate to find the direction of this relation. Further analysis should reveal it.

Similarity of values regarding the way people should relate to each other in the educational setting was a generally good predictor, both for competence in task behavior, and for interpersonal satisfaction.

COMPATIBILITY DEVELOPMENT

The compatibility hypotheses refer to an interpersonal relation at a specific point in time. The postulate of group development, described in FIRO (op. cit., p. 168), may be integrated with the notions of compatibility to generate hypotheses about the evolution of the relation between administrator and interactor. The hypothesis of compatibility development then asserts:

> The compatibility of an administrator with salient others in the areas of inclusion, control and affection, respectively, correlates positively with effectiveness during the first, second, and third phases of administrative interaction.

This hypothesis follows from evidence arising from the study of small groups. It has been noted that the early concerns of group members are with inclusion problems--whether or not to belong to the group and how much to participate; when these are resolved, control becomes the center of attention--the question of who will lead and who will follow; finally affection emerges--the question of how emotionally involved group members will be with one another.

Applied to school administration, this suggests that compatibility with school and community members in the interpersonal areas of inclusion, control, and affection may have differential influence on effectiveness, depending upon how long the administrator has served in a particular school system. The hypothesis suggests that when he is just starting out, it should be most important that the administrator be compatible with his staff and community with respect to inclusion. At some later period, control compatibility should become important; and finally, when he is well established in a job, compatibility with respect to affection should have the most influence on his effectiveness.

If this hypothesis is confirmed, it has important implications for the selection of administrators. It suggests, for example, that a particular principal might be relatively ineffective in a given school system for the first year (incompatible with respect to inclusion) but later develop into an extremely effective person for the job (compatible with respect to control and affection) if he were retained. Or the reverse might occur--a principal might function very well in a school system for a few years (compatible with respect to inclusion and control) but later become much less effective (incompatible with respect to affection).

The hypothesis does not specify the type of compatibility to be used in testing compatibility development. All types were investigated. As a result of the investigation, a revision was made in the hypothesis. This revision, although ad hoc, seems consistent with the original concept and does provide a more specific test of the hypothesis.

Originator compatibility (oK) seems the most appropriate type for testing this hypothesis when it is applied to teachers, since the relation involved is dyadic. The hypothesis therefore asserts that effectiveness ratings given a principal by a teacher are a function of the degree of complementarity with regard to initiating and receiving behavior between the teacher and principal. Interchange compatibility (xK) is usually more appropriate to group situations, since it refers to the atmosphere within which a relation exists rather than to the directionality of giving and taking between two people.

Another problem in testing this hypothesis on the pilot data arises from the difficulty in defining theoretically the "first, second, and third phases of administrative interaction." It is difficult to predict, in this situation, just how many years each phase might involve.

After an examination of the educational administration situation, it seemed reasonable that the first year might be considered phase one for the hypothesis. In talking with principals and teachers it appeared that a principal's first year was unique in that it was spent largely in familiarizing himself with the job, and getting to know the people with whom he worked. It seems to be a definite "feeling out" period in which principal and teacher try to work out their pattern of work and cooperation. It is probably not accidental that the "honeymoon" is usually considered to last one year for a variety of situations. When a principal returns to his job for the second year, he is perceived differently. He is now an experienced person, who can be dealt with on a different basis.

The dividing point between phases two and three was difficult to choose. It seemed that after three years in a job a man's pattern of administration was pretty well settled, so that the second and third years might be regarded as those in which the problem of relative influence between teacher and principal is worked out. Following that phase, a more permanent relation between the two begins being established. Principals in phase one will be called "newcomers"; phase two, "regulars"; and phase three, "veterans."

The choice of years to define phases applies to the educational administrator situation. Whether or not it is universal must depend on investigation of each specific context.

One final refinement of the hypothesis has to do with the diminishing impact of the area compatibilities on each phase. For example, phase one overlaps somewhat with phase two and little or not at all with phase three. Hence, for newcomers the relation between effectiveness and inclusion compatibility should be greatest, followed by the relation between control compatibility and effectiveness, and last, affection compatibility and effectiveness. Since phase two overlaps both phases one and three, the inclusion and affection compatibility correlations should both be less than control for regulars. And in phase three for veterans, the order of correlation size should be affection, control and inclusion.

Hence, the hypothesis would be confirmed by a pattern of correlations Guttman has called a simplex (Guttman, 1954, pp. 269-324), a matrix in which the diagonals are largest and in each row the correlations diminish as they get farther from the diagonals.

The hypothesis may now be restated more precisely:

> If originator compatibilities between teachers and principal are correlated with the teachers' ratings of the principal, and these correlations are computed separately for those principals who have held their jobs for one year (phase one), two to three years, (phase two), and more than three years (phase three), then the pattern of correlations between phases one, two, and three, and originator compatibilities in the areas of inclusion, control , and affection, forms a simplex.

Subjects. All principals in the pilot study along with all teachers who responded to each principal were used to test this hypothesis. This included 21 principals and 231 teachers from three of the pilot school districts. The questionnaires used to test the hypothesis were the FIRO-B taken by the principal, plus the FIRO-B, a rating of the principal, and the PAI-Job questionnaire asking for an evaluation of administrative functioning taken by the teachers. The hypothesis was tested by computing the appropriate correlations.

Results. Originator compatibilities were computed for the three phases as defined, and these were correlated with an overall rating of the principal, filled out by each teacher:

Please rate your principal on the following scale:

worst you 0----1----2----3----4----5----6----7----8------9 best you
ever knew ever knew

The resulting correlations are shown in Table 26. The matrix is a perfect simplex, confirming the hypothesis.

Table 26

Correlations between Originator Compatibilities between Principal and Teacher and Ratings of Principal by Teacher for Three Administrator Phases

	oK^I	oK^C	oK^A	N
Newcomers	30*	03	- 09	61
Regulars	-14	16	12	106
Veterans	-35*	15	28*	64

*Significant at .05 level

Exploring other types of compatibility to round out the picture adds only one item. Interchange inclusion compatibility correlates .20 for regular principals. From these data we can conclude:

How high an overall rating a teacher gives a newcomer principal depends in part on their agreement as to who should initiate interaction between them and who should wait to receive it. For regular principals this rating depends partly on agreement as to who gives orders and who takes them, and partly on agreement as to how much contact they should have with each other. For veteran principals the teachers' rating depends in part on their agreement as to who is to initiate and who is to receive overtures of affection and friendship.

A second rating of the principal by the teacher consists of the sum of this evaluation, as measured by PAI-Job, on four functions: communication, administrative skill, instructional leadership, and problem solving ability. This measure is a more specific evaluation of the principal's ability, while the overall rating is a global impression of the principal as a whole. Results based on the specific evaluation are presented in Table 27.

Table 27

Correlations between Originator Compatibilities between Principal and Teacher and Ratings of Principal by Teacher for Evaluation of Four Administrative Functions of Principal by Teacher

	oK^I	oK^C	oK^A	N
Newcomers	-08	-08	26*	58
Regulars	-16	16	-06	92
Veterans	-27*	-05	35**	61

This pattern is similar to that of Table 26 except for the reversal of oK^I and oK^A for newcomers. Apparently in evaluating competence, as opposed to giving an overall rating, teachers are governed more by affection compatibility than inclusion compatibility.

Another approach to understanding this unpredicted phenomenon comes through examining the interchange compatibility matrix, shown in Table 28.

Table 28

Correlations between Interchange Compatibilities of Principal and Teacher and Ratings of Principal by Teacher for Evaluation of Four Administrative Functions of Principal by Teacher

	xK^I	xK^C	xK^A	N
Newcomers	25*	20	15	58
Regulars	14	23*	-01	92
Veterans	06	11	03	61

Here the prediction is borne out except for xK^A for veterans (also a minor aberration of xK^A for regulars). Inclusion compatibility seems to predict evaluation of newcomers, but it is interchange of inclusion rather than origination. Evaluation of regular principals is also better predicted by interchange than by originator compatibility. Combining the two results, the following conclusions emerge:

How well a teacher evaluates the abilities of a newcomer principal depends on (1) how much they like the same amount of contact with each other, and (2) how much they agree on which of them should make the overtures of friendship and which should wait and receive them. For regular principals this evaluation depends partly on the agreement between teacher and principal as to how structured and formal their relation is to be in terms of giving and receiving orders. For veteran principals the teachers' evaluation is partly a function, again, of their agreement as to who initiates and who receives overtures of friendship.

The hypothesis is confirmed for overall ratings of the principal by the teacher.

RELATIONAL CONTINUITY

The hypotheses of compatibility and of compatibility development refer to the relationship between administrator and interactor in the present and over a period of time. Another important focus for the study of an administrator's behavior is the relation of his present behavior on the job to his past behavior, during earlier periods of his life. If the pattern of an administrator's interpersonal behavior can be traced back to its origins, it may allow for a much better understanding of his present performance. This is especially true of his interpersonal relations. For example, an administrator's behavior and feelings toward authority figures or toward female subordinates may be better understood by reference to his early relation with his father or older brother, in the first case, and with his younger sisters in the second case.

The postulate of relational continuity presented in FIRO (op. cit., p. 81) asserts a consistency between interpersonal behavior and feelings in childhood and in adult life. Since this presentation there has been considerable theoretical development of these ideas and of the question of the origin of adult behavior in general, and specifically of administrative behavior. The empirical data to be presented are based on this theoretical development.

Origins of Administrative Behavior

Where and when does an individual learn his behavior and feeling patterns toward the individuals with whom he interacts--superiors, subordinates, men, women, colleagues, etc.? Much psychological theory agrees that the basic behavior patterns are largely determined in the early years of life; say about the first six years.

How does a child know what to do in the variety of situations that confront him, especially when these situations become more complex than simple physiological reactions? Whence comes his behavior repertoire? The sources of behavior alternatives seem to be three:

(1) Random and instinctive behavior. These are unlearned reactions to internal and external stimulation.

(2) Proscriptions, usually from parents, including:
  (a) demands for certain types of behavior, and
  (b) parents' desires for child's behavior, as perceived by the child.

(3) The child's observation and perception of his own behavior and others, including:
  (a) observing his own behavior and feelings; for example, his own delight when his mother gives him undivided attention;
  (b) observing other people's behavior and feelings; for example, the experience of his father's punishment of him;
  (c) observing others behaving and feeling toward each other; for example, his mother and father fighting and then making up.

In short, a child's behavior alternatives come from instinctive or random behavior, from what people tell him to do, and from what he observes people doing and feeling. A further assumption is that as he grows he maintains or eliminates these initial behaviors as a function of the satisfaction (reward, anxiety reduction) and the dissatisfaction (punishment, anxiety induction) brought about as a result of particular behavior.

The concern of the present study is with (3) above: the relation between the behavior observed by a child in his environment and his later adult behavior as an administrator. Specifically, two hypotheses based on the FIRO postulate of relational continuity will be explored:

Hypothesis I. There is a positive correlation between behavior and feelings in the childhood situation and the appropriate adulthood situation in the interpersonal areas of inclusion, control and affection.

Hypothesis II. The similarity between the childhood and adulthood situations is greatest when the sex and status similarity between the two situations is greatest, and diminishes as the similarity decreases. (For example, the transference from father to son is greatest for male boss to male employee, and gets progressively less to relations of male boss to female employee, male employee to female boss, etc.)

These hypotheses will be defined and explicated with increasing specificity throughout the remainder of this discussion. The basic situation can be stated in schematic terms. The child, who shall be called *ego* (E), observes the behavior of feelings of an individual (the *actor*, A) toward another person (the *target* of the behavior, T). At a later time, for example in adulthood, ego participates in an actor-to-target situation, either as actor or target. The hypotheses state the general relation between these two acts (actor to target).

For the following analysis, consider the carryover of behavior from early childhood (time 1) to the present adulthood stage in which the administrative behavior under study is occurring (time 9). (This leaves intervening time periods--later childhood, adolescence, young adulthood--for later study.)

The basic relational continuity situation:

$$(A_1 \rightarrow T_1) \xrightarrow[p]{} (A_9 \rightarrow T_9)$$

Where A= actor
→= behaves or feels toward
T= target
$\xrightarrow{}$= implies with probability p

and subscripts 1 and 9 indicate time periods of early childhood and adulthood, respectively.

This schema will be used for the explication of the hypotheses. The following explanation will proceed by describing: (1) the specific persons defining A and T; (2) the mechanisms through which relational continuity is hypothesized to operate; (3) the dimensions and levels of interpersonal behavior/feelings involved in the continuity; (4) one measurement technique, and one procedure for testing the hypotheses; and (5) results of testing the hypotheses on the pilot population of teachers and parents for several of the hypotheses.

Actors and Targets

Hypothesizing the continuity of behavior from the $(A_1 \rightarrow T_1)$ interaction to the $(A_9 \rightarrow T_9)$ interaction requires specification of the various types of actor-target relations. That is, dimensions which are useful for describing the A-T relation, in the sense that they are relevant to the hypothesis of relational continuity must be specified. For example, to assert that sex-type is an important dimension is to imply that as a result of observing his father's relation to his mother, a son would be more likely to carry over his father's behavior toward a female (that is, someone of the same sex as his mother), than he would toward a male.

In the psychological literature on this topic, two dimensions seem especially relevant: (1) the sex of each member of the relation, male (M) or female (F); and (2) relative status with regard to decision-making--either the actor is *above* (*a*) the target in status, such as father, boss, teacher; or the actor is on the *same* (*s*) status level as the target, such as twin brother, colleague, associate; or the actor is *below* (*b*) the target in status, such as son, employee, student. Thus, each of the four individuals involved (A_1, T_1, A_9, T_9) can be male or female, and each relation $(A_1 \rightarrow T_1)$ and $(A_9 \rightarrow T_9)$ can be above, same, or below in status.

For each of these formal possibilities, the salient figures for a child must be specified as he progresses through life. Table 29 lists these different salient figures for each age period based on varying the sex (M, F) and status (a, s, b) variables. The present investigation is concerned only with the early childhood and adult periods for purposes of exploring the relational continuity hypothesis.

Table 29

Salient Figures for Each Time Period

		Early Childhood 1.. 2..	Late Childhood 3.. 4..	Adolescence 5.. 6..	Young Adulthood 7.. 8..	Adulthood 9.. 0..
Above Male (.1.)	(.11)	Older brothers	Older brothers	Older brothers	Older brothers	Older brothers
	(.12)	Older boys	Older boys	Adult men		
	(.13)	Father	Father	Father	Father	Father
	(.14)		Men teachers	Men teachers	Older men teachers	Men bosses
Above Female (.2)	(.21)	Older sisters	Older sisters	Older sisters	Older sisters	Older sisters
	(.22)	Older girls	Older girls	Adult women		
	(.23)	Mother	Mother	Mother	Mother	Mother
	(.24)		Women teachers	Women teachers	Older women teachers	women bosses
Same Male (.3.)	(.31)	Brother	Brother	Brother	Brother	Brother
	(.32)	Boy playmates	Boy playmates	Boy playmates	Men classmates	Men colleagues
	(.33)					
	(.34)				Spouse	Spouse
Same Female (.4.)	(.41)	Sister	Sister	Sister	Sister	Sister
	(.42)	Girl playmates	Girl playmates	Girl classmates	Women classmates	Women colleagues
	(.43)					
	(.44)				Spouse	Spouse
Below Male (.5.)	(.51)	Younger brothers	Younger brothers	Younger brothers	Younger brothers	Younger brothers
	(.52)	Younger boys	Younger boys	Little boys	Little boys	
	(.53)				Sons	Sons
	(.54)					Men subordinates
Below Female (.6)	(.61)	Younger sisters	Younger sisters	Younger sisters	Younger sisters	Younger sisters
	(.62)	Younger girls	Younger girls	Little girls	Little girls	
	(.63)				Daughters	Daughters
	(.64)					Women subordinates

During the early childhood period, the primary people serving as models for the young child are those in his immediate family--father, mother, and brothers and sisters, including older, younger, and the same age (defined as less than two years difference). For early childhood, the values of A and T shall be restricted to these individuals. The only exceptions occur when there is a very strong surrogate; for example, if a person were without a parent, and a grandparent, uncle, or stepmother served as parent-substitute, or if a niece or nephew lived with the family as a sibling-substitute.

The post-childhood periods see a parade of people with the same sex and status relations as the original family--teacher, boss, children, spouse, etc. One test of the hypotheses requires selection of those adulthood figures who are very salient to the individual, and also who are different from the original persons from whom the behavior and feelings were originally learned. The figures used will be occupational and own family, including male and female bosses, male and female subordinates, male and female colleagues, spouse, sons, and daughters.

Mechanisms of Relational Continuity

The hypotheses as stated thus far only assert a continuity between childhood and adult behavior. They do not specify the precise relation nor the mechanisms through which this continuity occurs. In examining the various combinations of people and relations in the basic situation, certain mechanisms emerge. These mechanisms, which seem to be similar to some well known psychological mechanisms, can be generated simply by placing ego at various points in the basic situation. In this schema, ego must be either participant (i.e., A_1 or T_1) or observer in the childhood relation, and participant (i.e., A_9) in the adulthood relation, as shown in Table 30. These mechanisms will now be described and related to similar mechanisms in the psychological literature.

Table 30

Mechanisms of Relational Continuity
(All Possible Placements of Ego in Basic Situation)

	Childhood (1)		Adulthood (9)		
	Actor	Target	Actor	Target	Resulting Mechanism
(1)	Ego	T_1	Ego	T_9	Transference
(2)	Ego	T_1	A_9	Ego	Reciprocity
(3)	A_1	Ego	Ego	T_9	Impact Identification
(4)	A_1	Ego	A_9	Ego	Impact Elicitation
(5)	A_1	T_1	Ego	T_9	Vicarious Identification
(6)	A_1	T_1	A_9	Ego	Vicarious Elicitation
(7)	A_1	T_1	A_9	T_9	Perception Transference

Transference. $(E_1 \rightarrow T_1) \xrightarrow[p]{} (E_9 \rightarrow T_9)$ Ego behaves/feels toward a target in childhood and behaves/feels similarly toward a target in adulthood. For example, a child feels exploited and manipulated by her father, and when she becomes a teacher she has similar feelings toward her principal and superintendent.

It is interesting to compare this formulation with the concept of transference as presented by the Freudians and neo-Freudians. The original notion of Freud had to do with transfer only to the psychoanalyst:

> As the patient repeats in his relations with the analyst the infantile relations with his parents . . . (This is the classical Freudian position; transference is understood more broadly by some schools.) (Monroe, 1955, p. 316)
>
> Freud emphasized the idea that the patient transfers to the analyst the attributes of the significant persons of his childhood (usually the parents) and quite directly repeats his childhood experience. (Monroe, 1955, p. 518)

However, modern writers have extended the transference mechanism beyond the analytic situation to all interpersonal relations:

> In Freud's latest summary of his theories and findings he stated: . . . the patient sees in his analyst the return--the reincarnation--of some important figure out of his childhood or past, and consequently transfers on to him feelings and reactions that undoubtedly apply to this model.
>
> Actually transference phenomena also occur outside the analytic chamber, and are frequently characteristics of interpersonal ties in group relations. As Eissler has pointed out, transferences appear in hypnotic treatment, in mass phenomena, and in everyday life. (Scheidlinger, 1952, p.80)
>
> Everyday life Fenichel also found full of transference situations. Generally speaking, people tend to interpret current experiences in terms of earlier ones. (Scheidlinger, 1952, p. 82)

Thus, the formulation given here bears a close resemblance to the psychoanalytic notion of transference as it has evolved through the last two decades. The term transference will be used here in the sense defined in Table 30, not implying any other previous meanings for the term.

Perceptual transference. Actor and target are observed by ego during childhood and ego observes the same relation in adulthood. This mechanism refers to a determinant of perception, stating essentially that given an adult relation a person will tend to see that relation, in part, in terms of his previous experience with such relations. For example, if his father tended to ignore his younger sister and felt that she was unimportant, the person may tend to perceive principal's orientation toward teachers as ignoring and as feeling they are insignificant. This is a transference of perception rather than of behavior and feelings as in the previous situation.

Although it appears very interesting, this phenomenon will not be dealt with in the present study.

Identification. $(A_1 \rightarrow E_1) \xrightarrow[p]{} (E_9 \rightarrow T_9)$ Ego is behaved/felt toward by an actor in childhood, and behaves/feels similarly toward a target in adulthood. For example, a father acts in an authoritarian manner toward his son, and the son, when he becomes a superintendent, acts in an authoritarian manner toward his principals.

Again, it is interesting to compare this concept with the psychoanalytic notion:

> While there are some differences as to how the term (identification) is applied, it generally implies that a child gives its emotional allegiance to one of its parents and attempts to duplicate in its own life the ideals, attitudes, and behavior of the parent with whom it is identifying. (Stoke, 1950, p. 163)
>
> The human being does not learn everything through trial and error. "Identification" is another method of learning, a process by which the growing child takes over behavior patterns and attitudes from adults. (Alexander and Ross, 1952, p. 11)
>
> It is by this mechanism (identification) that parental dictates become internalized. The child thus in a manner of speaking becomes the parent and follows the parental admonition as if it came entirely of later identifications in determining character, but he (Freud) calls the later identifications "later editions of the parents." (Monroe, 1955, p. 88)
>
> Identification as it typically operates is unconscious, and the person is not aware of the fact that he is modifying his own behavior to pattern it after that of another person. (Symonds, 1946, p. 319)

Hence, the present explication of the term seems consistent with the psychoanalytic notion, being narrower in that it makes no commitment to the causes or consciousness of the mechanism as does the psychoanalytic concept, and being more specific in that it asserts that identification takes place within an interpersonal relation and in the areas of inclusion, control, and affection.

Impact identification means that ego has participated in the childhood interaction, that is, he is T_1. For example, a son strongly disciplined by his father identifies with his father and as a principal is a strong disciplinarian of his male teachers. Vicarious identification means that ego has observed two others in interaction (he is neither A_1 nor T_1) and has identified with the actor. For example, he identifies with his father's treatment of his sister and behaves, as an adult principal, toward his female teachers as his father did toward his sister.

Elicitation. $(A_1 \rightarrow E_1) \xrightarrow[p]{} (A_9 \rightarrow E_9)$ Ego is behaved/felt toward in childhood in a certain way, and elicits the same behavior from others when he becomes an adult. For example, his older brother makes fun of his competence and doesn't take him seriously. When he becomes a principal, his superiors also treat him this way. In other words, there is continuity in the type of behavior he elicits from other people.

The concept of elicitation (the case described is an example of impact elicitation) is somewhat similar to Leary's notions of "provoking" behavior, or "training" others to respond in certain ways. Leary emphasizes the point that people act in certain ways that provoke particular responses:

> What we are saying here to a human being is . . . your own interpersonal behavior has, more than any other factor, determined the reception you get from others. Your slowly developing pattern of reflexes has trained others and yourself to accept you as this sort of person--to be treated in this sort of way. You are the manager of your own destiny. (Leary, 1957, p. 117)

While Leary does not go into a relational continuity concept directly, his view may be reconciled with the notion that the behavior a person provokes in childhood $(A_1 \rightarrow ego_1)$ could be very similar to that which he provokes in adulthood $(A_9 \rightarrow ego_9)$.

If the elicitation hypothesis is confirmed, it should have especially important significance for selection of educational administrators, since it would allow for the prediction of the type of behavior a given candidate will elicit from those around him--how they will act and feel toward him.

Vicarious elicitation, similar to the other vicarious situations, simply means that the mechanism operates by virtue of an observation in childhood of a two-person relation not involving ego, in which ego identifies with the target, and later elicits the same behavior as the target. For example, he sees his father as the recipient of abuse from his mother, and he, as superintendent, gets into the position of eliciting abuse from school board members, community leaders, and parents.

Reciprocity. Ego's behavior/feelings toward others during childhood is similar to other people's behavior/feelings toward him during adulthood. For example, Leary, in discussing the "principle of reciprocal interpersonal relations" says:

> Our actions toward others generally have the effect of pulling a reciprocal response from them. . . . If you walk up and aggressively shove a stranger the chances are good that he will shove you back. (Leary, 1957, p. 123).

Again, we must amend Leary's discussion for illustrative purposes. Our concept of reciprocity extends from childhood to adulthood, that is, it asserts that a person's childhood behavior will, when he is adult, elicit similar behavior from adults. This mechanism does not seem so well known as the others, and will not be dealt with further in this memorandum.

In summary, the primary mechanisms through which relational continuity is maintained are transference, identification and elicitation. These mean, respectively, that a person continues to act and feel toward others as he did toward early childhood figures; that he relates to others as he was related to as a child; and that he continues to elicit from people the same behavior and feelings he did as a child. These mechanisms could have resulted either through personal impact or vicariously through observation of the original childhood relations.

Dimensions and Levels

In addition to specifying the persons in the relations, their status relative to each other, and the mechanisms of relational continuity, it is necessary to delineate the particular areas of interaction which will be continuous throughout life. The primary interest of the present study is interpersonal behavior and, in particular, the dimensions postulated by the FIRO theory, inclusion, control and affection. Further, this interest extends to continuity from childhood to adult life at the levels of both behavior and feeling. Thus, it is desirable to measure these six aspects of each relation - I, C, A at the behavior and feeling levels.

Measurement

It now remains to devise measuring instruments and methods of testing the hypotheses. To have a complete test, it is desirable to measure early childhood relations, adulthood relations in general, and adulthood relations specifically in the educational administrative situation. The FIRO-B measures adulthood relations in general, and the PAI-scales measure relations in the educational administration setting. These tests are discussed elsewhere, so they will be referred to later only for specific predictions.

The questionnaire designed particularly for testing the hypotheses is called the Life Interpersonal History Enquiry, or LIPHE (pronounced life). One difficulty in any investigation of this type concerns the validity of measurements of early childhood events. The LIPHE measures these events by asking for an adult respondent's recollection. The use of such a method warrants further discussion.

Measurement of early childhood relations. There are many problems connected with obtaining data about events that occurred many years ago. Unknown distortions may have occurred which call into question the accuracy of methods based on recall by the persons involved in the original situation. On the other hand, observations made at the time may not have included the elements of the situations which eventually prove most significant, for example, unconscious factors. As a basis for exploring the advantages and disadvantages of various techniques of data collection about these events, let us first explore the various types of observations available.

There are three major points of reference from which childhood events may be viewed: (a) the parents' perceptions of the parent-child relation, (b) the child's perception, and (c) the "real" situation (that is, the perception of trained observers). Further, there are three main time points at which the observations may be made: (a) at the time of the childhood behavior (concurrent), (b) immediately following the event, and (c) sometime much later, for example, when the child reaches adulthood. Table 31 illustrates the various approaches to obtaining information about the parent-child relation:

Table 31

Data Sources for Parent-Child Relation

	Source of Report		
Time of Report	Parent (P)	Child (C)	Observer (O)
Concurrent (N)	NP (2,6)	NC (1,2)	NO (5)
Immediately following (F)	FP (2,6)	FC (1,2)	FO (5,2)
Much later (adulthood) (L)	LP (3,6)	LC (3,4)	LO (5,2)

The numbers in each cell refer to difficulties discussed below.

Since the conscious perceptions and behaviors of the adult are hypothesized to arise from the unconscious feelings about the self and feelings of others toward the self, it seems that the main interest of any investigation of relational continuity is with the unconscious perceptions and interpretations made by the child during the interaction with the parent. Relevant are the child's feelings--mainly the unconscious feelings--about such questions as "Does my parent treat me as if I'm a lovable person?" or "Does my parent really feel I am important enough for him to spend his time with me?"

Each of the methods of obtaining data listed above have drawbacks. These deficiencies will now be considered.

1. Child's need to distort because of feelings toward the parents. This applies to asking a child at the time of the occurrence of the event what his feelings are (NC, FC). The guilt or fear of the parents may make a child reluctant to state negative feelings (suppression), or fail to recognize that he has such feelings (repression). Thus, direct on-the-spot inquiry may not give the most accurate picture of the "real" feelings of the child--that is, the feelings that will persist and influence future behavior.

2. Unreliability of projective tests. The above drawback may be overcome to some extent by the use of projective techniques. The child may be asked indirectly and thus some suppression and repression may be avoided (NC, FC). However, validation data on projective techniques on children is very sparse, so that the accuracy of such data is questionable.

3. Fading of accurate memory. Any method involving a retrospective account of prior events is subject to forgetting. Asking an adult about his own childhood (LP, LC) has this drawback. Further, it is difficult to know how much distortion, and of which events, actually does occur; that is, to what degree forgetting is a motivated phenomenon. The force of this drawback may be mitigated by considering the content of what is forgotten. It may be that forgetting occurs readily for the specific content of a childhood event, but less readily for strong and significant feelings that attended these events. The predictive superiority of feelings over behavior in the results to be presented lends support to this notion.

4. Adult's need to distort childhood situation to defend or blame parents. If it is true that feelings are more available than content, we still must contend with repressive factors, that is, events or feelings that would cause unconscious forgetting or distorting of childhood events (LC). For example, extreme guilt toward parents may cause the child to remember only pleasant relations with his father and mother. Without a reliable theory of repression it would be difficult to assess the effect of this factor on accuracy of recall.

5. Difficulty of accurate inference by observers in regard to child's unconscious reactions to parents. Although on-the-spot observation by objective observers would seem to be the most accurate method of assessing the behavior and feelings of the child, great difficulties are typically encountered in obtaining inter-judge agreement, especially about feelings (NO, FO, LO). In addition, there is a question as to whether the feelings inferred by the judges are the ones that have the most lasting effect on adult behavior.

6. Parent's needs to justify or punish himself for behavior toward child. For data gathered from the parents (NP, FP, LP) there is the possibility that the parents will attempt to present a socially desirable and justifiable report of the relation between parent and child. The parent, in the process of self defense, may blame the child for some unpleasant interaction. On the other hand, if the parent feels guilty, he may tend to blame himself and therefore distort his perception so that the child's behavior and feelings are seen as more positive than they "really" are.

Assessment of the relative importance of these drawbacks is very difficult. In addition, problems of feasibility enter. For example, to know about an adult's childhood precludes making direct observation of his childhood unless such observations were made when he was a child. This means that only retrospective instruments LP, LC, LO (that is, those that ask an adult to recall his past) are immediately practical. However, the above analysis suggests a method for assessing the validity of a retrospective questionnaire, by comparing results from such a questionnaire with data already acquired on these respondents when they were children.

Thus, the choice made in the present study is to select a retrospective questionnaire for immediate use, cognizant of all of the above deficiencies. At the same time plans have been made to test it against early childhood data (using the Institute of Human Development data). In addition, if the results of such a questionnaire correlate with other variables of interest and prove predictive, this will constitute a partial justification for the selection of this method of acquiring data about childhood events.

The questionnaire must, of course, provide for a measure of relations between all childhood actors and targets, and between ego and all adulthood actors and targets. In addition, for all of these relations there must be a measure of inclusion, control and affection at both the behavior and feeling levels. The LIPHE instrument is described below. It should be clear, however, that selection of this measurement technique does not preclude other methods of testing the hypotheses. These hypotheses are not tied to any particular method of measurement.

Hypothesis Testing. The second hypothesis states that the value of the correlation for a mechanism decreases as $(A_9 \rightarrow T_9)$ becomes less similar to $(A_1 \rightarrow T_1)$ in the sense of sex and status relations. This seems plausible because: (a) on the one hand, the phenomenon of displaced continuity does occur, for example, when a father treats his children as his mother treated him; and (b) on the other hand, the direct carryover of a childhood relation seems more difficult when the adult relation is changed than when it reproduces the childhood scene.

Investigation of all the possibilities of this type of displacement greatly increases the number of relations to be investigated. The hypotheses may be stated more precisely by specifying the possible types of relational continuity and the predicted correlation for each instance of a mechanism. Using a weighting system for describing the difference between $(A_1 \rightarrow T_1)$ and $(A_9 \rightarrow T_9)$ with regard to sex and status, we can assign a total weight to each type of continuity situation. These weights will serve as the basis for predictions of relative size of correlations, a larger weight indicating a higher correlation. The weights are necessarily very gross approximations to the relative importance of relational differences, but they will serve to sharpen the hypotheses and simplify the task of finding empirical confirmation or disconfirmation for the hypotheses.

The weighting procedure reflects the following assumptions:

(1) Sex similarities are more important than status similarities.

(2) Impact mechanisms are more likely to exist than vicarious mechanisms.

(3) The direction of the status difference (e.g., above for 1, below for 9, or below for 1, above for 9) is not a significant factor. (This is an assumption that may be tested later.)

(4) Relations within the same interpersonal area are more likely than across areas.

(5) Relations are more likely within behavior levels than between levels.

(6) Relations are more likely across areas within a level, than across levels within an area.

(7) The most likely continuity will occur in the relation where $(A_1 \rightarrow T_1)$ is identical in sex, status, level and area to $(A_9 \rightarrow T_9)$, and the least likely in a different sex, status, level and area, namely, where one relation is above and the other below, actors are of different sex, targets are of different sex, one relation is feeling the other behavior, and the two relations are in different interpersonal areas.

These assumptions regarding weights can be converted into numbers, as is shown in Table 32.

Table 32

Weights for Assessing Similarity of Relations

	Sex			STATUS			AREA (ICA) AND LEVEL	
A_1 and A_9	T_1 and T_9	Weight	$A_1 \rightarrow T_1$)	($A_9 \rightarrow T_9$)	Weight	Level	Area	Weight
same	same	3	same, i.e., above side below	above side below	2	same	same	3
same	different	1	above	side	1	same	different	2
different	same	1	side	below	1	different	same	1
different	different	0	above	below	0	different	different	0
ego appears twice (i.e., impact)		1			2			

Any continuity situation can be weighted by summing the appropriate weights, hence total weights range from zero (vicarious mechanism, actors opposite sex, status of one relation is above, the other is below), to six (impact mechanism, actors are the same sex, targets are the same sex, relations are the same status). The higher the weights, the higher the predicted correlation for the continuity situation.

From this chart the weight for any given basic situation is determined, given the sex of A_1, A_9, T_1, T_9, and the status relations of ($A_1 \rightarrow T_1$) and ($A_9 \rightarrow T_9$). The resulting weights constitute the basis for a detailed specification of the hypothesis in that they hypothesize the relative size of correlations between childhood and adult situations. These situational weights are presented in Table 33. All hypotheses can be expressed in terms of this table of weights. Different columns apply to different hypotheses depending on the placement of ego.

An example may prove useful in assisting the reader to understand Table 33. Let us assume the following impact identification hypothesis: Father (A_1) behaves toward ego (T_1) in an authoritarian manner during childhood. When ego becomes an adult and a principal, she (A_9) behaves in the same way toward her male teachers (T_9) as her father did toward her. Thus A_1 is male, A_9 is female and T_9 is male. Starting at the top we choose in order the left half of the matrix (A_1, male), then the right half of the remainder (A_9, female). This leaves columns 05, 06, 07, 08. We then choose the right half (T_1, female) of the remainder and finally the left half (T_9, male). This leaves column 07. Now we note that A_1 is above T_1 in status (father-daughter), and A_9 is above T_9 (principal-teacher). Hence, on the left we choose first the upper third of the rows (A_1 a T_1), then the top one of these three rows (A_9 a T_9). Thus, cell 107 represents the example situation.

Table 33

Basic Weights for Hypotheses

		A_1 →	Male								Female							
		A_9 →	Male				Female				Male				Female			
		T_1 →	M		F		M		F		M		F		M		F	
(A_1--T_1)	(A_9--T_9)	T_9 →	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	(A_9 a T_9)		101 5	102 3	103 3	104 5	105 3	106 2	107 2	108 3	109 3	110 2	111 2	112 3	113 5	114 3	115 3	116 5
(A_1 a T_1)	(A_9 s T_9)		201 4	202 2	203 2	204 4	205 2	206 1	207 1	208 2	209 2	210 1	211 1	212 2	213 4	214 2	215 2	216 4
	(A_9 b T_9)		301 3	302 1	303 1	304 3	305 1	306 0	307 0	308 1	309 1	310 0	311 0	312 1	313 3	314 1	315 1	316 3
	(A_9 a T_9)		401 4	402 2	403 2	404 4	405 2	406 1	407 1	408 2	409 2	410 1	411 1	412 2	413 4	414 2	415 2	416 4
(A_1 s T_1)	(A_9 s T_9)		501 5	502 3	503 3	504 5	505 3	506 2	507 2	508 3	509 3	510 2	511 2	512 3	513 5	514 3	515 3	516 5
	(A_9 b T_9)		601 4	602 2	603 2	604 4	605 2	606 1	607 1	608 2	609 2	610 1	611 1	612 2	613 4	614 2	615 2	616 4
	(A_9 a T_9)		701 3	702 1	703 1	704 3	705 1	706 0	707 0	708 1	709 1	710 0	711 0	712 1	713 3	714 1	715 1	716 3
(A_1 b T_1)	(A_9 s T_9)		801 4	802 2	803 2	804 4	805 2	806 1	807 1	808 2	809 2	810 1	811 1	812 3	813 4	814 2	815 2	816 4
	(A_9 b T_9)		901 5	902 3	903 3	904 5	905 3	906 2	907 2	908 3	909 3	910 2	911 2	912 3	913 5	914 3	915 3	916 5
Column Numbers			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

M = male

F = female

T = target

A = actor

A a T = A is above T in status

A s T = A is same status as T

A b T = A is below T in status

1 (subscript) = at time of childhood

9 (subscript) = at time of adulthood

Each cell is numbered in standard matrix notation for reference later in specifying hypotheses.

Table 34

Hypotheses (in terms of Table 33)

Hypothesis	Which is Ego?	Which Columns Define Hypothesis?	Any Changes in Weights?
Vicarious Identification	A_9	1-16	no
Vicarious Elicitation	T_9	1-16	no
Impact Identification	T_1, A_9	1,2,7,8,9,10,15,16	add one
Impact Elicitation	T_1, T_9	1,4,5,8,9,12,13,16	add one
Transference	A_1, A_9	1,2,3,4,13,14,15,16	add one

Table 34 is read as follows: The hypothesis of impact identification, for example, asserts that for every continuity situation where ego is both T_1 and A_9, columns 1,2,7,8,9,10,15 and 16 of Table 33 define the hypothesis in that (if 1 is added to the weights) they stipulate the predicted weight of the correlations between the childhood relation ($A_1 \rightarrow E$) and the adulthood relation ($E \rightarrow T_9$) for all combinations of sex and status for all three persons involved.

The final step requires the specification of the hypotheses given above in terms of correlations from the questionnaire developed here. This will be done with reference to the items on the questionnaire, and the various correlations specified in Table 32. This requires a separate table for each hypothesis, since some mechanisms do not cover all cells. The columns of Table 33 used are given in Table 34 above.

For each mechanism, the hypotheses will be specified in terms of the relation and code number as used on the questionnaire. Also given will be the weight assigned the hypothesis, the cell (of Table 33) into which the relation falls, the sex of the respondent. These listings constitute the final explication of the hypothesis of relational continuity.

Although both parents and siblings are used to explain early childhood relations the present analysis is restricted to parents only. It is hoped that later analyses will explore the sibling relations.

Test of Relational Continuity Hypothesis

Two instruments were used to test relational continuity, designed to assess the continuity of behavior and feelings in a variety of interpersonal situations:

1. Childhood (LIPHE-1) and the general occupational environment of the adult (LIPHE-9)

2. Childhood (LIPHE-1) and the specific occupational environment of the educational administrator (PAI)

In addition, a number of subsidiary analyses were carried out, to shed some light on the psychometric properties of some of the instruments employed. These data are presented in appendix B.

The Pearson product-moment correlation coefficient was the basic statistic employed in this analysis. Complete matrices of correlation coefficients were generated to allow not only for the testing of the various hypotheses but also for the exploration of other interesting relationships. This form of analysis is considered a first approximation only.

Subjects. Two main random samples of subjects from three of the pilot communities were used in the present analysis: (a) 67 male subjects, consisting of 55 teachers, 10 parents and 2 principals, (b) 264 female subjects, including 146 teachers, 110 parents and 8 principals. Additional random samples of similar composition and partially overlapping the two main samples were drawn for the subsidiary analyses.

Results. The first hypothesis, "there is a positive correlation between behavior and feelings in the childhood situation and the appropriate adulthood situation in the interpersonal areas of inclusion, control and affection," asserts that all the mechanisms of relational continuity are effective in predicting adult behavior. This can be tested by considering the results without regard to the weights assigned above. There were two main investigations, one comparing LIPHE-1 with PAI, and one comparing LIPHE-1 with LIPHE-9. The latter is more extensive in scope, exploring a wider variety of relations, although less specifically. The LIPHE-1--PAI analysis is limited to relations between administrator and interactor in the school situation. Thus it is less inclusive but more precise, in the sense that the referent of the behavior is specified as one individual. For this reason the LIPHE-1--LIPHE-9 analysis will be used primarily to explore the first hypothesis regarding the general effectiveness of the mechanisms of relational continuity, and the LIPHE-1--PAI analysis will be used primarily to explore the second hypothesis regarding specific weights. Each however will be used to supplement the other.

For purposes of summarizing the wealth of data collected and presenting it in a meaningful manner, the correlation coefficients were averaged for certain areas and dimensions. Simple arithmetic means were computed since the coefficients involved were not excessively large nor did they differ greatly among themselves (see Guilford, 1956, pp. 325-26). Weighting proved unnecessary also because no mean involved coefficients based on different numbers of subjects.

Tables 35-37 present the results of testing the hypotheses of impact and vicarious identification, impact and vicarious elicitation and transference, both within and across the I,C,A dimensions for the LIPHE-9 analysis. The data are shown separately for the male and female sample, for the continuity of behavior and feelings, and for childhood events involving either the father or the mother. Each cell entry represents an average based on seven correlation coefficients; each of these in turn represents a correlation between a parent figure and one of the following: ego to male boss (E-MB); ego to female boss (E-FB); ego to male colleague (E-MC); ego to female colleague (E-FC); ego to male subordinate (E-MS); ego to female subordinate (E-FS); ego to wife (or husband) (E-W) (E-H).

Table 35

Average[1] Correlation Coefficients for LIPHE-1 and LIPHE-9-Hypothesis of Impact Identification

	Male Sample (N=67)				Female Sample (N=244)			
	Behavior		Feeling		Behavior		Feeling	
	Fa	Mo	Fa	Mo	Fa	Mo	Fa	Mo
I - I	.07	.25*	.23	.23	.04	.02	.02	.08
C - C	.08	.26*	.16	.31**	.06	.03	.06	.07
A - A	.21	.10	.24*	.35**	.09	.04	.11	.11
C - I	.04	.04	.22	.31**	.05	.04	.00	.04
A - I	.17	.21	.22	.30*	.01	.10	.03	.09
I - C	.02	.03	.20	.20	.02	.01	.07	.08
A - C	.05	.02	.17	.25*	.00	.02	.09	.09
I - A	.00	.18	.26*	.30*	.07	.02	.10	.08
C - A	.05	.06	.30*	.36**	.01	.00	.06	.07
	.08	.13	.22	.29	.04	.02	.06	.08
	.10		.26		.03		.07	
	.18				.05			

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[1] Each average based on 7 r's

*p < .05

**p < .01

Table 36

Hypothesis of Impact Elicitation

	Male Sample (N=67)				Female Sample (N=244)			
	Behavior		Feelings		Behavior		Feelings	
	Fa	Mo	Fa	Mo	Fa	Mo	Fa	Mo
I – I	.06	.22	.29*	.12	.05	.01	.11	.11
C – C	.02	.10	.27*	.16	.11	.07	.15*	.20**
A – A	.18	.18	.27*	.24*	.06	.08	.12	.12
C – I	.08	.06	.24*	.20	.05	.06	.12	.09
A – I	.14	.21	.25*	.20	-.01	.05	.09	.13
I – C	.02	.08	.32**	.01	-.05	-.01	.05	.14
A – C	.11	.13	.08	.20	-.10	-.01	-.13	.06
I – A	-.03	.20	.32**	.16	.07	.02	.14*	.11
C – A	.08	.10	.29*	.27*	.04	-.02	.15*	.15*
	.07	.14	.26	.17	.02	.03	.12	.12
	.11		.22		.03		.12	
	.16				.08			

Table 37

Hypothesis of Vicarious Identification

	Males				Females			
	Behavior		Feeling		Behavior		Feeling	
	Fa	Mo	Fa	Mo	Fa	Mo	Fa	Mo
I - I	.12	.22	.15	.19	.02	.06	.06	.10
C - C	-.04	.23	.26*	.14	.08	.13*	.10	.10
A - A	.07	.04	.16	.31**	.05	.06	.12	.14*
C - I	.09	.11	.21	.10	.02	.02	.02	.05
A - I	.13	.19	.26*	.14	.05	.06	.09	.05
I - C	.01	.05	.19	.20	.01	.03	.10	.08
A - C	.05	-.04	.26*	.15	.01	-.03	.11	.11
I - A	.05	.16	.16	.24*	.07	.09	.12	.13*
C - A	.07	.17	.26*	.11	.01	.09	.09	.11
	.06	.13	.21	.15	.04	.06	.09	.10
	.10		.18		.05		.10	
	.14				.08			

Table 38

Hypothesis of Vicarious Elicitation

	Males				Females			
	Behavior		Feelings		Behavior		Feelings	
	Fa	Mo	Fa	Mo	Fa	Mo	Fa	Mo
I - I	.05	.14	.20	.12	.01	.01	.02	.10
C - C	.02	.16	.23	.06	.10	.06	.09	.07
A - A	.07	.14	.20	.29*	.05	.05	.04	.08
C - I	.16	.08	.24*	.03	.04	.01	.03	.06
A - I	.06	.08	.22	.15	.00	.02	.11	.03
I - C	.12	.12	.16	.10	-.08	.02	.01	.06
A - C	.07	,10	.16	.10	.07	-.04	.06	.04
I - A	.02	.12	.23	.19	.06	.10	.04	.07
C - A	.08	.16	.08	.28*	.01	.03	.07	.05
	.07	.12	.19	.15	.03	.03	.05	.06
	.10		.17		.03		.06	
	.14				.05			

Table 39

Hypothesis of Transference

	Males				Females			
	Behavior		Feelings		Behavior		Feelings	
	Fa	Mo	Fa	Mo	Fa	Mo	Fa	Mo
I - I	.05	.33**	.13	.20	.06	.03	.07	.10
C - C	.24*	.10	.20	.28*	.14	.13*	.11	.12
A - A	.10	.23	.15	.30*	.04	.05	.10	.15*
C - I	-.05	.03	.19	.21	.01	.05	.07	.05
A - I	.06	.34**	.12	.25*	.00	.08	.05	.13*
I - C	,05	.08	.13	.27*	.01	.02	.12	.03
A - C	.03	.07	.09	.27*	-.03	-.03	.13*	.15*
I - A	-.01	.23	.15	.24*	.04	-.01	.09	.09
C - A	.09	.11	.18	.25*	.07	.06	.10	.13*
	.06	.17	.15	.25	.04	.04	.09	.11
	.12		.20		.04		.10	
	.16				.07			

It will be noted at once from these tables that the various hypotheses proved far more fruitful when tested on the male than on the female sample. Analysis of the latter produced generally low, positive correlations which, in the majority of the comparisons, did not reach statistical significance. However, there are a number of notable exceptions which will be pointed out below in the discussion of the various hypotheses. It is difficult at this time to assign the discrepancy between the male and female sample unequivocally to any one source. However, it is suspected that the reason for the discrepancy lies in the differential meaningfulness of the LIPHE-9 items for male and female respondents respectively. Unlike the male sample, the female sample contains a fairly large proportion of parents (50%). It is likely that the female parent, working largely as a housewife, found most of the items on LIPHE-9 irrelevant to her experiences since these items deal with occupational roles, with relationships to such figures as male boss, female subordinate, male colleague, etc., in short, with relationships with which the female subject had either none or no recent experience. Being compelled by the testing situation to respond to all items, the female parent may have responded in many cases in a random rather than systematic fashion to these questions, a condition not likely to lead to high correlations. Table 40 illustrates this point by showing the relative magnitudes of (averaged) correlation coefficients obtained from the male and female samples in the behavior and feeling areas.

In contract, when the PAI analysis is considered (Table 41), the male and female samples do not differ in magnitude of correlations produced.

Table 40

Average Correlations for Male and Female Samples (LIPHE-9 Analysis)

	Male		Female	
	Behavior	Feelings	Behavior	Feelings
Impact Identification	.10	.26	.03	.07
Impact Elicitation	.10	.22	.02	.12
Vicarious Identification	.10	.18	.05	.10
Vicarious Elicitation	.10	.17	.03	.05
Transference	.12	.20	.04	.10
Total	.10	.21	.03	.09

Table 41

Average Correlations for Male and Female Samples (PAI Analysis)

	Male		Female	
	Behavior	Feelings	Behavior	Feelings
Impact Identification	.11	.15	.06	.16
Impact Elicitation	.08	.08	.06	.13
Vicarious Identification	.10	.30	.08	.25
Vicarious Elicitation	.10	.23	.07	.13
Transference	.13	.16	.10	.12
Total	.10	.18	.07	.16

It will be recalled that the male and female samples used in the LIPHE-9 analysis did differ from each other and that the difference was attributed to the presence of occupationally inexperienced mothers in the female sample. In the present case both samples consist of teachers who presumably have, regardless of their sex, equal experience with principal-teacher relationships, thus assuring equivalence of the test items for the two samples. Under these conditions, then, no differences are expected between the two samples.

Another consistent trend evident in the data concerns the apparently greater relational continuity of feelings than of behavior. Table 42 shows that this trend holds for every hopothesis, regardless of whether the male or female sample is considered, and for both the LIPHE-9 and the PAI analyses.

Table 42

Average Correlations for Behavior and Feelings

Liphe-9 Analysis

	Imp.Ident.	Imp. Elic.	Vic.Ident.	Vic.Elic.	Transf.	Mean
Behavior	.07	.06	.07	.06	.09	.07
Feelings	.16	.17	.14	.11	.15	.15

PAI Analysis

	Imp.Ident.	Imp. Elic.	Vic.Ident.	Vic.Elic.	Transf.	Mean
Behavior	.08	.07	.08	.08	.11	.08
Feelings	.15	.10	.28	.18	.14	.17

This discrepancy between the continuity of behavior and feelings is perhaps most parsimoniously explained with reference to the greater saliency of feelings and attitudes in the determination of the nature of the parent-child relationship, and thus, presumably, of later interpersonal relations. According to this view, behavioral events acquire significance and meaning only insofar as they convey to the person information about the feelings of others toward him. An action of the parent is interpreted by the child in relation to such questions as "Does my parent really feel I am important enough for him to spend his time with?" In other words, it is not just the action as such that is important, but the information it conveys about the parent's attitudes toward the child. From this point of view, it would seem to follow that feelings and attitudes are more easily recalled than behavioral events and therefore exert a more systematic and valid effect on the measuring instrument. The consensus among writers on identification, ranging from Freud to Miller & Dollard, seems to confirm the present conclusion regarding the differential importance of behavior and feelings in the process of identification and relational continuity (see Mehra, 1961, pp. 2, 3, 6).

A third generalization about the source of relational continuity concerns which parent is more influential in determining adult behavior and feelings. Table 43 shows the number of significant average correlation coefficients (each based on seven single coefficients) for relationships originating with either the mother or the father. There is a fairly pronounced tendency, especially in the behavior area, for significant relationships to originate in behavior and feelings involving the mother.

The reason for the greater saliency of the mother may perhaps be sought in the childrearing patterns of our culture which assign to the father, especially during the early years of the child's life, a secondary role; the father remains a rather remote figure until much of the socialization process has been accomplished. This result, however, is reversed when the PAI analysis is considered in that relations with the father are most influential for adult behavior.

Table 43

Number of Significant Correlations, Father vs. Mother

Liphe-9 Analysis

	Behavior		Feelings	
	Fa.	Mo.	Fa.	Mo.
Male	1	4	16	20
Female	0	2	4	8
Total	1	6	20	28

Table 44

Number of Significant Correlations, Father vs. Mother

PAI Analysis

	Behavior		Feelings	
	Fa.	Mo.	Fa.	Mo.
Male	5	2	21	14
Female	2	1	15	15
Total	7	3	36	28

The difference in the two results may be accounted for by the fact that the teachers in the PAI study, both male and female, were asked questions about their relationships to principals who were predominantly male. Under these conditions, as mentioned above, childhood relations involving the father are expected to exert greater influence on later behavior and feelings than relations involving the mother. For the LIPHE-9 analysis, adult relations were equally distributed among the male and female figures.

These were the general trends. Results for each mechanism of relational continuity follow.

Impact identification. For the female sample in the LIPHE-9 analysis this hypothesis must be considered disconfirmed. None of the correlations in the areas of either behavior or feelings reached a satisfactory level of statistical significance. It must be pointed out, however, that this conclusion applies to the averaged correlation coefficient, which conceals in a few cases one or even two single correlations out of a total of seven which reached the .05 level of significance. Since we are here concerned with summarizing the trends in the data, it was decided to disregard these scattered significant correlations for the moment. The foregoing considerations apply also to the discussion of the following hypotheses.

Impact identification is only partially confirmed by the PAI data for the female respondents. It appears that if the father felt interested in his daughter, the daughter, as a teacher later in life, will feel interested in her principal. There is also an indication that daughters who have enjoyed an early nurturant environment tend to admire the principal's abilities in their later capacities as teachers. This appears to be a general trend which will be discussed in greater detail below.

For males in the LIPHE-9 analysis this mechanism appears highly influential in mediating the continuity of feelings between childhood and adulthood. The data strongly support the notion that if the mother expressed feelings of affection and respect toward her son, he will exhibit such feelings toward other persons later in life. Feelings of affection on the part of the father also play a role, but a less influential one. It is also interesting to note that the greater the feelings of respect for the child's competence expressed by the mother, the greater the interest and liking of the son for others in his adult life. In fact, it appears that a highly supportive early environment (the expression of feelings of affection and respect on the part of the mother and father) results in the expression of generally positive feelings toward others in later life. The converse would be true, of course, for those having been reared in an emotionally neutral or punitive early environment (low scorers).

Concerning the continuity of behavior patterns, it appears that the inclusion and dominance behavior of the mother leads the son as an adult to engage actively in social activities and to act dominantly toward others in the occupational setting.

For males in the PAI analysis, this hypothesis was only partially confirmed. Most notably, feelings of interest in and affection for the son by the father lead quite consistently to feelings of interest and admiration for the principal's abilities on the part of the son once he has become a teacher.

Quite contrary to expectation, the father's early behavior toward the son, in the area of affection, seems to lead the latter into a submissive attitude vis-a-vis the principal on matters of policy.

Vicarious identification. For female respondents in the LIPHE-9 analysis, the data offer only very tenuous support for the hypothesis. The perception of an affectionate relationship of the mother with the father seems to carry over into feelings of affection for others in later life. Similarly, observing her mother's dominance behavior toward her father seems to lead to dominant behavior toward others in adulthood.

For females in the PAI analysis, however, this hypothesis is overwhelmingly confirmed for the area of feeling and not confirmed for the area of behavior. It is quite clear from the data that the perception of feelings of interest, respect and affection of the parents for each other leads to such feelings for the principal in the later occupational setting. Similarly, there is a strong tendency for the perception of early feelings of affection and interest of the parents for each other to lead to later feelings of interest in and respect for the principal's abilities.

For the male sample in the LIPHE-9 analysis this hypothesis is partially confirmed. It appears that the perception of the mother's feelings of affection for the father leads the son, as an adult, toward expressing feelings of liking toward others. A similar situation obtains with respect to the father's expression of feelings of respect for the mother. This result seems similar to Helper's (1955) finding that identification is more likely to occur when the parents approve of each other as models for the child. The expression of affection and respect on the part of the parents for each other may be taken as approximately equivalent to the expression of "approval."

The vicarious observation of the parent's behavior toward each other appears to have little effect on the son's later behavior.

In the PAI analysis, for the male sample, as in the case of the female sample, this hypothesis is overwhelmingly confirmed for the area of feelings but not for behavior. The perception, on the part of the son, of the parent's feelings of interest, respect, and affection for each other seems to lead quite decisively to feelings of interest, admiration, and affection for the principal once the son has become an adult and a teacher. In contrast, the observation of the behavior of the parents toward each other does not appear to exert an influence upon the son's later behavior as a teacher.

Impact elicitation. For the female sample of the LIPHE-9 analysis, this hypothesis insofar as it relates to the continuity of feelings of respect for others (control) is confirmed by the data. It appears that if the child provoked feelings of respect from her parents, the child as an adult continues to elicit such feelings from significant others in the occupational environment. There is an indication also that if the child elicited feelings of respect from her parents, she will behave later in a manner which tends to evoke feelings of liking from others.

For the female PAI group, impact elicitation is not confirmed for either the behavior or the feeling areas. There is a suggestion that early feelings of respect elicited from the mother lead to the later elicitation of feelings of interest from the principal. Similarly, if affectionate feelings were elicited from the mother and father, feelings of respect for the teacher's abilities were later elicited from the principal.

For the males in the LIPHE-9 analysis, this hypothesis is overwhelmingly confirmed with respect to feelings elicited from the father (the mother's influence seems to be restricted to the affection area) and not confirmed with respect to the continuity of elicited patterns of behavior. In the behavior area none of the average correlations approaches the usual levels of statistical significance.

This hypothesis may be considered as being disconfirmed for both the behavior and feeling areas for the males in the PAI analysis.

Vicarious elicitation. This hypothesis is not confirmed for the females in the LIPHE-9 analysis. For the female sample in the PAI study this hypothesis received only tenuous support. There is some indication that the perception of the father's elicitation of feelings of interest and affection from the mother leads to later self-confident behavior such that feelings of respect are elicited by the teacher from his principal. A similar continuity between feelings is found between the perception of the mother's elicitation of interest from the father and the elicitation of feelings of liking from the principal.

For the males in the LIPHE-9 analysis this hypothesis may be considered as being essentially not confirmed. There is only a slight indication that the perception of affectionate feelings elicited by the mother from the father leads to such elicitation by the son from his later occupational interactors. This is also true for feelings of respect elicited by the mother from the father.

The data collected under this hypothesis for males in the PAI analysis indicate that the son's vicarious participation in the feelings elicited by the parents from each other (especially feelings of interest in and affection for each other) enable the son later in his life to elicit feelings of interest and admiration for his abilities from his principal.

Transference. For the females in the LIPHE-9 analysis there is some evidence to suggest that the affectionate feelings of the daughter for the mother are transferred to others in later life, and that dominant behavior toward the mother leads to similar behavior patterns toward others once the child has grown into an adult. There is also a tendency for early feelings of affection for the mother to lead to more assertive behavior generally; the person would seem to be both more outgoing and more dominant in her interpersonal relations after having enjoyed a supportive relationship with her mother.

For females from the PAI analysis the data show clearly the greater influence of the father in determining later responses to the principal. Thus, if the daughter felt respect for her father's competence, she is likely to admire the principal's abilities also when she becomes an adult and a teacher. Similarly, positive feelings of the daughter toward the father in general tend to be transferred if behavior is restricted to affectionate behavior toward the father and similarly close behavior toward the principal later in life.

For males in the LIPHE-9 study, this hypothesis is clearly confirmed with respect to behavior and feelings involving the mother, but not the father. It appears that feelings of respect and affection for the mother are transferred onto significant others in later life and that the expression of feelings of affection, inclusion and control toward the mother results generally in the expression of positive feelings toward others. In addition, it appears that high interaction with the mother during childhood leads to active social participation with occupational figures in later life. There is also a suggestion that outspoken behavior toward the father leads to similar behavior in adult situations.

For males in the PAI study, as for females, the data for this hypothesis quite clearly show the greater influence of the father in the continuity of behavior and feelings. Thus, it is quite clear that early feelings of interest in, admiration and affection for the father on the part of the son are transferred to the principal by the son as an adult and a teacher. There seems to be no transference of feelings for the mother onto the principal in later life. In the behavior area, high interaction with and affection for the father results in aloofness from (I,A) and submission to (C) the principal in matters of policy--a result seemingly inexplicable in terms of the present theoretical framework. The transference of outspokenness toward the mother into emotionally close behavior toward the principal constitutes another theoretically moot point.

General Comments. In a previous section, a number of general trends apparent in the data were discussed briefly: (1) the similarity of the responses of the male and female subjects; (2) the greater continuity of feelings than of behavior; and (3) the apparently greater influence of the father in determining later responses to predominantly male superiors.

After having discussed the data under each hypothesis in detail, a number of additional, general observations may be made. (1) In the area of feelings which, as noted earlier, seems to be the crucial medium of relational continuity, there is a marked tendency for an early nurturant environment to produce adults who display in general positive feelings toward their occupational associates and, similarly, for an early punitive environment to produce generally negative responses to others in later life.

An early nurturant environment may be defined in terms of high scores on LIPHE-1 items dealing with the three FIRO dimensions: inclusion (I felt interested in my parents, my father felt interested in me, etc.), control (my parents felt respect for my competence, I felt respect for my father's competence, etc.), and affection (my parents felt love for me, etc.). Similarly, an early punitive or, at least, an emotionally neutral early environment may be inferred for those persons who deny the truth of the preceding items for their own case. Positive feelings toward significant others in adulthood may be defined in terms of high scores on the various PAI scales in the areas of inclusion (teacher is interested in the principal), control (teacher admires the principal's abilities), affection (teacher likes principal). Conversely, negative feelings are defined by denial of the preceding statements.

The tendency noted above is exemplified by the numerous statistically significant correlations between early feelings of interest, of admiration and affection and later feelings of liking, respect for ability and interest in others. If these correlations are averaged, disregarding the mechanisms of relational continuity, the following picture emerges:

Table 45

Average Correlations Between Childhood and Adulthood Feelings (PAI)

	Male		Female		
	Fa	Mo	Fa	Mo	
(I-C), (A-C)	.27	.19	.21	.18	.21
(C-C)	.16	.17	.15	.17	.16
(I-I), (A-A)	.19	.11	.16	.14	.15

In the interpretation of this tendency the question arises whether or not the relationship between early and later feelings of a positive nature toward others may be more parsimoniously explained in terms of agreement response set (yea-saying) or the tendency to give socially desirable responses to items regardless of their content. Thus, it is conceivable that the yea-sayer will agree with the statement, "I felt love for my mother" and also with the statement, "I respect the principal's abilities" simply on the basis of agreement response set, or because agreement with these items seems the socially approved response. Such a set, of course, produces high correlations which cannot be interpreted in the same manner as high correlations produced by trait-appropriate responses. Fortunately, the question can be empirically decided by investigating the social desirability components of the tests used in the analysis. Such a study, reported in Appendix B, tends to disconfirm the response-set hypothesis.

(2) Interpretation of the data in their present form is also handicapped by the difficulties surrounding the assessment of statistical significance level for averaged correlations and, perhaps more seriously, the absence of methods for determining the statistical significance of a difference between averaged correlation coefficients. Standard references provide no guidance on the subject. Unless some agreement can be reached on this issue, these difficulties argue strongly for an analysis of promising areas in terms of frequencies.

The second part of the relational continuity hypothesis asserts the accuracy of the weighting system described earlier. To test this hypothesis the LIPHE-1-PAI analysis will be used. Tables 46-50 present the detailed statement of this hypothesis. They give the relation and the correlation obtained in the study for each of the mechanisms of relational continuity.

Table 46

Vicarious Identification LIPHE-1, PAI

	Male Sample				Female Sample			
	Fa-Mo		Mo-Fa		Fa-Mo		Mo-Fa	
	Teach-Prin				Teach-Prin			
	wt	r	wt	r	wt	r	wt	r
EIB - EIB	5	05	5	13	4	04	7	13
ECB - ECB	5	12	5	21	4	16	7	17
EAB - EAB	5	08	5	01	4	03	7	02
EIB - ECB	4	08	4	12	3	08	6	04
EIB - EAB	4	09	4	20	3	12	6	12
ECB - EIB	4	08	4	06	3	04	6	11
ECB - EAB	4	06	4	01	3	01	6	04
EAB - EIB	4	03	4	00	3	05	6	04
EAB - ECB	4	19	4	20	3	09	6	09
EIF - EIF	5	28*	5	39*	4	25*	7	35*
ECF - ECF	5	-26*	5	-31*	4	-21*	7	-29*
EAF - EAF	5	19	5	33*	4	15	7	24*
EIF - ECF	4	-32*	4	-43*	3	-30*	6	-35*
EIF - EAF	4	24*	4	32*	3	17	6	24*
ECF - EIF	4	24*	4	29*	3	17*	6	24*
ECF - EAF	4	19*	4	30*	3	14	6	19
EAF - ECF	4	31*	4	40*	3	27*	6	37*
EAF - ECF	4	-31*	4	-42*	3	-27*	6	-35*

Table 47

Vicarious Elicitation LIPHE-1, PAI

	Male Sample				Female Sample			
	Fa-Mo		Mo-Fa		Fa-Mo		Mo-Fa	
	Prin-Teach				Prin-Teach			
	wt	r	wt	r	wt	r	wt	r
EIB - EIB	5	11	5	-02	7	04	4	-03
ECB - ECB	5	-05	5	01	7	-01	4	-04
EAB - EAB	5	19	5	04	7	10	4	00
EIB - ECB	4	-03	4	-05	6	-02	3	-02
EIB - EAB	4	02	4	-16	6	-04	3	-14
ECB - EIB	4	27*	4	-11	6	20*	3	-12
ECB - EAB	4	-02	4	05	6	-02	3	11
EAB - EIB	4	15	4	07	6	14	3	08
EAB - ECB	4	-17	4	-20	6	-10	3	-09
EIF - EIF	5	23*	5	27*	7	15	4	13
ECF - ECF	5	-11	5	-30*	7	-02	4	-14
EAF - EAF	5	20	5	17	7	16	4	16
EIF - ECF	4	-34*	4	-42*	6	-16	3	-19*
EIF - EAF	4	21	4	15	6	-19*	3	13
ECF - EIF	4	-01	4	15	6	-02	3	08
ECF - EAF	4	06	4	08	6	08	3	05
EAF - EIF	4	27*	4	26*	6	18	3	18
EAF - ECF	4	-38*	4	-41*	6	-16	3	-22*

Table 48

Transference LIPHE-1, PAI

	Male Sample				Female Sample			
	Ego-Fa		Ego-Mo		Ego-Fa		Ego-Mo	
	Teach-Prin				Teach-Prin			
	wt	r	wt	r	wt	r	wt	r
EIB - EIB	9	-23*	7	-12	9	-13	7	-09
ECB - ECB	9	-02	7	08	9	07	7	15
EAB - EAB	9	-14	7	04	9	-07	7	05
EIB - ECB	8	00	6	07	8	05	6	11
EIB - EAB	8	-28*	6	-02	8	-08	6	-03
ECB - EIB	8	-04	6	20	8	-02	6	11
ECB - EAB	8	18	6	40*	8	15	6	26*
EAB - EIB	8	-11	6	07	8	-05	6	10
EAB - ECB	8	-33*	6	-02	8	-19	6	-01
EIF - EIF	9	31*	7	-06	9	16	7	04
ECF - ECF	9	-23	7	01	9	-23*	7	-08
EAF - EAF	9	14	7	-05	9	12	7	00
EIF - ECF	8	-30*	6	04	8	-27*	6	-06
EIF - EAF	8	21	6	-06	8	20*	6	01
ECF - EIF	8	28*	6	02	8	18	6	07
ECF - EAF	8	30*	6	-11	8	27*	6	-01
EAF - EIF	8	33*	6	-10	8	18	6	00
EAF - ECF	8	-27*	6	07	8	-20*	6	-02

Table 49

Impact Identification LIPHE-1, PAI

	Male Sample				Female Sample			
	Fa-Ego Teach-Prin		Mo-Ego		Fa-Ego Teach-Prin		Mo-Ego	
	wt	r	wt	r	wt	r	wt	r
EIB - EIB	7	-13	5	-13	4	-06	5	-04
ECB - ECB	7	12	5	15	4	10	5	11
EAB - EAB	7	-08	5	-03	4	03	5	03
EIB - ECB	6	-04	4	19	3	03	4	14
EIB - EAB	6	-18	4	-11	3	-02	4	-02
ECB - EIB	6	-05	4	-03	3	-03	4	-07
ECB - EAB	6	-09	4	-10	3	-10	4	-05
EAB - EIB	6	-05	4	-05	3	-02	4	06
EAB - ECB	6	-27	4	09	3	-10	4	08
EIF - EIF	7	31*	5	-06	4	23*	5	08
ECF - ECF	7	-12	5	-15	4	-13	5	-16
EAF - EAF	7	13	5	15	4	15	5	18
EIF - ECF	6	-26*	4	06	3	-22*	4	-01
EIF - EAF	6	17	4	-04	3	19	4	04
ECF - EIF	6	14	4	12	3	09	4	18
ECF - EAF	6	08	4	06	3	14	4	08
EAF - EIF	6	30*	4	10	3	18	4	20*
EAF - ECF	6	-28*	4	-16	3	-26*	4	-21*

Table 50

Impact Elicitation LIPHE-1, PAI

	Male Sample				Female Sample			
	Fa-Ego		Mo-Ego		Fa-Ego		Mo-Ego	
	Prin-Teach				Prin-Teach			
	wt	r	wt	r	wt	r	wt	r
EIB - EIB	9	01	1	-06	9	00	7	03
ECB - ECB	9	-06	7	01	9	08	7	-07
EAB - EAB	9	09	7	-13	9	09	7	-11
EIB - ECB	8	-05	5	06	8	-12	6	-02
EIB - EAB	8	-01	6	-24*	8	05	6	-16
ECB - EIB	8	12	6	04	8	11	6	02
ECB - EAB	8	-11	6	-10	8	-08	6	05
EAB - EIB	8	18	6	-13	8	11	6	01
EAB - ECB	8	-10	6	-17	8	-15	6	-10
EIF - EIF	9	11	7	-10	9	14	7	05
ECF - ECF	9	-07	7	-10	9	-13	7	-15
EAF - EAF	9	-05	7	04	9	07	7	13
EIF - ECF	8	-12	6	01	8	-13	6	-11
EIF - EAF	8	01	6	-09	8	08	6	05
ECF - EIF	8	12	6	12	8	15	6	19*
ECF - EAF	8	-01	6	-02	8	08	6	09
EAF - EIF	8	05	6	10	8	11	6	18
EAF - ECF	8	-13	6	-22	8	-19*	6	-24*

To test the hypothesis that higher weights predict higher correlations, the average correlations for predictions of each weight across all mechanisms are compared in Table 51.

Table 51

Average Correlations for Hypotheses of Each Weight

Weight:	9	8	7	6	5	4	3
Average correlation:	.12	.14	.10	.12	.15	.15	.13

Clearly, the weight hypothesis in general is disconfirmed. In order to investigate it in more detail, the weighting system may be analyzed into the accuracy of its various components, and these may be examined for each mechanism separately. Table 52 presents these data.

Table 52

Average Correlations for Weighting Components by Mechanism

Weighting Component	Weight	Vicarious Identification	Vicarious Elicitation	Mean of Vicarious Mechanisms	Transfer.	Impact Identification	Impact Elicitation	Mean of Impact Mechanisms	Grand Mean
Mechanism									
Impact	1	–	–	–	.13	.12	.09	–	.11
Vicarious	0	.18	.13	–	–	–	–	–	.16
Sex									
Both same	3	.19	–	.19	.21	.16	.08	.15	.16
Same, different	1	.18	.16	.17	.08	.10	.10	.09	.12
Different, "	0	–	.10	.10	.15	.12	.10	.12	.12
Status									
Both same	2	–	–	–	.13	–	.09	.11	.11
One different	1	.18	.13	.16	–	–	–	–	.16
Two different	0	–	–	–	–	.12	–	.12	.12
Inter-Personal Area (for same level)									
Same	3	.18	.17	.18	.11	.12	.08	.10	.13
Different	2	.18	.11	.14	.13	.12	.11	.12	.13
Level									
Feeling	0	.28	.18	.23	.14	.15	.10	.13	.17
Behavior	0	.09	.08	.09	.11	.08	.08	.09	.09
Respondent									
Male	0	.20	.16	.18	.15	.13	.09	.12	.14
Female	0	.16	.10	.13	.11	.11	.10	.11	.12

There are many interesting results of this breakdown. The most significant factors contributing to the effectiveness over all mechanisms are level (behavior or feeling) and type of mechanism (impact or vicarious). The hypotheses were confirmed better for feelings than behavior and better for vicarious mechanisms than impact (contrary to expectations). As expected, the mechanisms worked better when the sex of the participants in the original relation corresponded to those in the adult relation. The result on status differences is confounded with impact-vicarious mechanism and thus cannot be interpreted clearly. The mechanisms worked better for male respondents than female respondents, but there was no better prediction for behavior or feelings in the same interpersonal area, than for when they cross areas.

A closer look reveals considerable difference between the impact and the vicarious mechanisms in addition to the unexpected superiority of the latter. A clue to this difference comes from examining the area discrepancies. Vicarious mechanisms, work much better when the childhood and adult relation are in the same interpersonal area, while the impact mechanisms work somewhat better when the areas are different. This suggests that the effect of behavior aimed directly at a child is to have him divert what he learns from this experience into another area. The superiority of vicarious mechanisms means that children are more influenced in their behavior, and especially feelings, by what the parents express toward each other, than by what is expressed directly toward them. Perhaps the direct behavior is too emotionally involving while the vicarious situations can be observed in a more relaxed fashion.

Vicarious mechanisms also work much better for feelings than behavior, and for male respondents than female. For impact mechanisms this differential effectiveness is not so marked.

One other result of interest is the superiority in the transference mechanism for situations in which the sex of the actor and target in a childhood relation is the same, respectively, for actor and target in adulthood. This is particularly true for transference of feelings. For either males or females, feelings toward father were transferred to the principal where feelings toward their mother were not. Curiously, this did not occur in a general way in the LIPHE-9 analysis, where mother was more influential over all relations in general. Apparently the specificity of the principal role was a factor in this difference.

This analysis allows for a reweighting system for refining the hypotheses. This reweighting should reflect the results shown in Table 52 and hence cause a change in the assumptions about the operation of the mechanisms of relational continuity. Since there is a considerable difference in the operation of the impact and vicarious mechanisms, separate weights were devised for each type, as for all mechanisms totally. These weights, shown in Table 53, can then be used to predict the mechanisms for the next, larger study.

Table 53

Empirically Revised Weights for Hypotheses of Relational Continuity

Component		For Impact	For Vicarious
Level	Feeling	3	5
	Behavior	2	2
Sex	Both same	4	4
	Same-different	2	3
	Both different	3	-
Respondent	Male	3	4
	Female	2	3

INTERPERSONAL SYMBOLISM

An important aspect of the administrator's interaction concerns the values and philosophy he and his interactors hold with regard to education. Insight into the origins and correlates of such values may provide a better understanding of the administrative situation. The FIRO-B postulate of interpersonal symbolism provides a means of exploring this area.

This postulate asserts that an individual's behavior and attitudes toward abstract ideas and inanimate objects are predictable from a knowledge of his behavior and attitudes toward people:

> Attitudes and ideas an administrator holds about educational values are positively correlated with his orientations toward interpersonal relations.

Explanation

Behind this hypothesis lies the assumption that the apparently objective and rational attitudes people have toward inanimate objects, including abstract ideas, are usually or always projections of similar attitudes toward people. It is natural to anthropomorphize. For example, it is common to describe ideas with the same adjectives used to describe people - bold, exciting, foolish, noble; objects like ships and countries are referred to as "she"; names are given like Mother Nature, Father Time, Uncle Sam.

In previous studies it has been found that political attitudes are significantly related to interpersonal orientations (Christiansen, 1959, Gladstone, 1955, Scott, 1960, Schutz, 1958, p. 69). For example, in the latter study people who expressed a great desire to be controlled by others also expressed attitudes typical of the political abdicrat, such as "The president should make it a policy to leave problems to his subordinates until it is absolutely necessary for him to deal with the problem personally."

The present hypothesis maintains that the same thing will be true of values toward education , and of what are usually considered to be impersonal, intellectual preferences in approach to the world. It asserts that these, too, are a function of the feelings and behavior one expresses toward and wants from people. Thus, the administrator's approach to education should be predictable from a knowledge of his approach to people.

More specifically, a relation is hypothesized between the fundamental orientations people have toward interpersonal relations (as measured by FIRO-B) and their educational values (as measured by VAL-ED). As an extension of this, their orientations toward a specific person, the principal, will be related to their values. The FIRO-B - VAL-ED correlation tests the degree to which general attitudes toward people are predictive of educational values, while the PAI - VAL-ED correlation tests whether or not there is consistency between educational values and behavior and feelings toward a specific individual. The latter has the advantage of allowing the respondent to be more specific about his attitudes toward people rather than having to answer in the abstract, and the disadvantage of being contaminated by the reality of what the principal is actually like. However, it is assumed that a considerable part of the teachers' perceptions of the principal is determined by how they see people generally; that part should lead to significant correlations with educational values.

It would be desirable to have a general measure of interpersonal feelings parallel to interpersonal behavior as measured by FIRO-B. Unfortunately, although such an instrument now exists (FIRO-F), it was not completed in time to be included in this analysis. The "feelings" scales of PAI will be regarded as an approximation to this measure.

Two additional analyses, hopefully will develop the picture more fully. The first explores the relation between a person's fundamental interpersonal orientations and his characteristic cognitive styles. The assumption is that the way we perceive experience and order our world, cognitively, is partly a carryover from interpersonal experience. Hence, there should be some relation between orientation toward people and orientation toward cognitive experience.

Second, the relation between cognitive orientations and educational values is explored. Here the causal relation is particularly unclear, but, in terms of the hypothesis, both cognitive style and educational values are derived in part from interpersonal orientations and may thus be related to one another.

Definitions and Measures

1. Educational values are opinions about various aspects of what should happen in the school situation. This includes the importance of schools as social institutions, how children should be taught (e.g., child-centered, subject-centered, mind training), what should be taught in the schools (e.g., facts, social adjustment, skills, modes of thinking), how the teacher should behave toward students (e.g., firm or permissive, friendly or distant), how the administrator should behave toward teachers (e.g., superior or equal, authoritarian or democratic), and what should be the relation between school personnel (teachers and administrators) and the local community (e.g., conformity of teachers to local values; administrators as community leaders or as followers of community ideas).

An instrument VAL-ED was developed to measure these attitudes. For all the scales referring to interpersonal aspects of the school situation, the FIRO theory was used as a basis of generating items. The following interpersonal areas were chosen as the most important for the educational setting:

1. What should the school teach the child?
2. How should the teacher treat the child?
3. How should the administrator (principal, etc.) treat the teacher?
4. What is the teacher's role in the local community?
5. What is the administrator's role in the local community?

For each of these five areas, 36 statements were constructed to reflect various points of view, 12 each generally emphasizing inclusion, control, and affection. This gives a total of 15 12-item sets, or 180 items. For each statement the subject was asked to pick one of the following alternatives:

1. I strongly disagree with this statement
2. I disagree
3. I mildly disagree
4. I mildly agree
5. I agree
6. I strongly agree with this statement

The 12 items in each category were Guttman scaled on the basis of data obtained from the pilot study. Three items were dropped from each, giving 9-item final scales. Examples of items in each scale follow.

School to Child

The school *should* help a child to learn:

Inclusion: a. to work with other people

b. to accept himself (negative item)

Control: a. to strive to excel

b. respect for the opinions of authorities (negative item)

Affection: a. to be a warm, expressive person

b. not to express affection in front of others (negative item)

Teacher to Child

In his (or her) behavior toward children, a teacher *should*:

Inclusion: a. treat all children equally

b. provide special activities and assignments for special groups of children (negative item)

Control: a. always be in charge of the childrens' activities

b. allow children great initiative (negative item)

Affection: a. be a personal friend to the students

b. encourage children to confide in him (or her)

Administrator to Teacher

In his behavior toward a teacher, a school administrator (principal, etc.) *should*:

Inclusion: a. have teacher representation on all administrative committees

b. try to keep his decisions unbiased by teacher opinion (negative item)

Control: a. control the activities of a teacher who teaches unpopular ideas

b. retain complete authority over the activities of the teacher

Affection: a. be friendly but impersonal with teachers (negative item)

b. encourage a teacher to confide in him

	Teacher to Community	and	Community to Teacher
	In his (or her) behavior toward the local community a teacher should:		In their behavior toward the teachers, members of the local community should:
Inclusion:	a. be active in community affairs		b. seek out teacher participation in local activities
Control:	a. be careful not to antagonize the important people in the community		
	b. not drink or swear in public		
Affection:	a. not share his personal life with members of the local community (negative item)		b. be free to confide their problems to teachers

	Administrator to Community	and	Community to Administrator
Inclusion:	a. include the community in school activities		b. invite school administrators to local organizations
Control:	a. determine his own curriculum regardless of community opinion (negative item)		b. watch the administrators carefully and demand removal if dissatisfied
Affection:	a. choose some close friends from the community		b. invite administrators to their homes

These 15 scales were given to most subjects in the pilot communities, and constitute the form used in hypothesis testing.

It should be noted that, although these scales were generated theoretically, they embody most of the current educational controversy such as life adjustment (school to child, inclusion), grouping and differential treatment of students (teacher to child, control), and academic freedom (administrator to teacher, control).

Three additional scales were added to this instrument, dealing with non-interpersonal areas. These deal with attitudes toward the importance of education; toward "progressivism" in education or whether the school should concentrate on subject matter or on the needs of the child; and toward the proper focus for the school's attention, the child as a whole, or his mind. The last two were originally considered to be two ends of the same scale, but empirical analysis indicated that, although they are negatively correlated (-.29), the correlation is relatively low and separate measurement seems justified. Again, the Guttman technique was used to derive three 9-item scales. Sample items are:

Importance of Education (Imp)

a. Education makes people doubt and question things that should be taken on faith. (negative item)

b. The main value of an education is to help a person find a better job. (negative item)

Nature of Educational Concern (subj)

a. The school should devote most of its attention to the personal interests, needs, and abilities of children.

b. Learning best takes place when the interests and experiences of a child are the center of a learning activity.

Scope of School's Domain (mind)

a. If schools are to train the minds of children, they cannot devote time to nonacademic activities as well (e.g., crafts, clubs, sewing).

b. The best learning occurs when children are exposed to teachers who are masters of their subjects.

2. Cognitive orientations: specifically, the extent to which the subject's approach to the world is in terms of introversion or extraversion, thinking or feeling, sensing or intuiting, and judging or perceiving.

The Myers-Briggs Type Indicator, described above is used to measure these variables.

3. General present interpersonal orientations are measured by FIRO-B, also described above.

4. Interpersonal relations between the administrator and the people with whom he works are measured by the PAI-Scales, described above.

Restatement of Hypothesis

These considerations allow for more specific statements of the hypothesis:

1. Educational values are positively correlated with general orientations toward interpersonal relations (VAL-ED, FIRO-B).

2. Educational values are positively correlated with orientations toward specific important people in the present; in particular, teachers and their principal (VAL-ED, PAI).

3. Cognitive styles are correlated with general interpersonal orientations (MBTI, FIRO-B).

4. Cognitive styles are correlated with educational values (MBTI, VAL-ED).

Results and Discussion

1. Educational values are positively correlated with general interpersonal orientations (VAL-ED and FIRO-B).

The test of this hypothesis is to correlate each FIRO-B scale within the areas of inclusion, control, and affection with VAL-ED scales from these areas. The prediction is that within areas all correlations will be significant. Results are given in Table 54. Subjects for this analysis include teachers, parents, and administrators, male and female. The total number of subjects involved in any correlation is at least 357, except for the first three scales where N = 120.

For the non-interpersonal scales (importance, subject, mind) there is virtually no relation between fundamental attitudes toward interpersonal relations and these attitudes. Apparently other factors largely determine these types of educational values.

The interpersonal values in education, that is, those having to do with the kind of relations people in education should have with each other, present a more positive picture. Of the 30 predictions made, 19 are significant. Thus, 65% of the predicted correlations are significant, compared to only 30% of non-predicted correlations (across interpersonal areas).

Closer analysis reveals a more interesting finding. Of the ten predicted relations in the inclusion area, eight are significant, and for affection all ten are significant. In the control area, however, only one of the ten predictions exceeded the .05 level of significance. Clearly the hypothesis is confirmed for the inclusion and affection areas, but not for control.

Table 54

Correlation of FIRO-B Scales with VAL-ED Scales from the Same Interpersonal Areas

VAL-ED

FIRO-B	Importance of Educ.	Progressivism(Mind)	Traditionalism(Subj)	School-Child	Teacher-Child	Administrator-Teacher	Adminis'or-Community	Teacher Community
Expressed inclusion	-12	12	01	20*	11*	16*	20*	22*
Wanted inclusion	-08	02	01	11*	04	-02	20*	22*
Expressed control	08	19*	00	06	13*	-07	08	-08
Wanted control	05	06	-03	-05	03	06	07	-06
Expressed affection	-14*	08	01	16*	16*	18*	10*	14*
Wanted affection	-04	01	02	14*	11*	13*	19*	25*
Total	-25	48	02	62	58	44	84	69

*significant at least at the .05 level.

Looking at the results in the other direction, values in each area of school relations seem to be about equally well predicted. Of the six predictions for each area, either three or four are significant for each school relation. Summing correlations for each relation area reveals slight differences in the direction of high predictability from FIRO-B for the values concerning how the administrator and the community should act toward each other.

The detailed results are stated below. Some liberty is taken with the interpretation of the correlation coefficient, but these statements are all consistent with the findings.

a. School to child relations.

People who initiate contact with others and, to a somewhat lesser extent, people who want to be included in social activities, feel that it is important for the school to teach the child to get along well socially.

People who like to have close, personal relations with others think that the school should teach the child to express affection openly.

The opposite of these statements is also implied by the correlations. That is, people who prefer not to have much contact with others don't feel that it is important to teach the child to get along well socially; and those who prefer impersonal relations feel the child should be taught to inhibit the expression of his affection. This type of reversal is applicable to any of the statements following.

b. Teacher to child relations.

People who initiate contact with others feel that all children should be treated the same way by the teacher regardless of special need.

People who try to control others feel that the teacher should encourage initiative and independent decisions in the children. People who like close, personal relations themselves feel that the teacher should express affection openly to the children.

c. Administrator to teacher relations.

Initiators of personal contact think that administrators should include teachers in school activities. People who like close, personal relations feel that the administrator should be personally friendly with the teachers.

d. Administrator to community and teacher to community relations.

People who like contact with others feel that members of the community should be involved in school activities, and that teachers should participate in community activities; while people who tend to prefer solitude feel that the community should not be involved in school affairs.

Those who want close, personal relations feel that administrators and teachers should be personally involved with the community.

Values in the control area having to do with controlling the behavior of students or teachers, or conformity, appear not to be predictable from a report of how an individual tries to control others. This result is discussed further below, in the discussion of cognitive orientations.

In summary, educational values were predicted from a knowledge of general interpersonal orientations when the values were related to inclusion or affection behavior among teacher, child, administrator and community. They were not predicted when they related to the importance of education, progressive of traditional teaching methods, or interpersonal behavior related to control.

2. Educational values are positively correlated with orientations toward specific important people in the present, in particular the principal toward teachers (VAL-ED, PAI).

The direct measure of this hypothesis is the correlation between the educational values scales and the behavior and feelings of teachers toward their principals. How they do feel about their principal should be related to how they think various people in education should feel about others. Table 55 presents these data. Subjects for this analysis include 69 male teachers and 107 female teachers. The total number of subjects involved in any correlation is at least 150 for the interpersonal scales and 76 for the non-interpersonal scales.

Of the 96 predicted correlations 41 (43%) are significant. Behavior is not as good a predictor as feelings (33% compared to 53%). Inclusion and affection are again better predictors than control. Out of 32 possible correlations each, inclusion predicted 15, affection 18, and control only 8. Interpersonal areas of educational values were equally well predicted but non-interpersonal were less successful. Of 12 correlations each, the number significant in each interpersonal area across Table 2 were 0,4,1,7,7,8,7,7. The following statements can be made:

a. Importance of education.

No significant relations.

b. Subject matter.

Teachers who feel that schools should concern themselves only with expert presentation of subject matter tend not to like their principal.

c. Mind.

Teachers who feel that educators should deal with the whole child, not just his mind, like and include the principal. Those who prefer to concentrate on training the mind think their principal is competent and want him to feel that they are competent.

Table 55

Correlations between Teachers' Educational Values and Behavior and Feeling Toward their Principals

PAI Tchr to Princ		Importance of Educ.	Mind	Subj.	VAL-ED School-Child	Teacher-Child	Administrator-Teacher	Teacher-Community	Administrator-Community
BEHAVIOR	e^I	04	28*	-15	12	14	19*	12	22*
	w^I	08	11	01	15*	25*	25*	09	24*
	e^C	04	02	-17	01	-12	-01	-18	-10
	w^C	03	08	03	04	03	-02	09	02
	e^A	05	18	-12	21*	19*	28*	26*	37*
	w^A	-10	08	-04	25*	18*	21*	12	10
FEELING	e^I	-03	17	-20	25*	29*	09	20*	10
	w^I	04	19	-14	18*	25*	20*	16*	30*
	e^C	-06	-26*	12	05	-06	-30*	-22*	-19*
	w^C	-13	-35*	09	-09	05	-11	-15*	-27*
	e^A	14	-37*	29*	25*	24*	30*	37*	37*
	w^A	01	20	-13	28*	15*	15*	11	01

*significant at least at the .05 level

d. School to child.

Teachers who want the principal to include them in school activities, or who think the principal is an important person, feel that the child should be taught how to be socially accepted. Teachers who feel a great deal of mutual warmth, closeness and liking with the principal also feel that children should be taught to express their affection openly.

e. Teacher to child.

Teachers who want to be included by the principal, who feel that the principal is an important person, or who want him to feel that they are important people, feel also that all children should be treated equally by the teacher. Teachers who feel mutual warmth and liking with the principal feel that the teacher should express her affection openly to the children.

f. Administrator to teacher.

Teachers who want to include or be included by the principal in school activities, or who want the principal to feel that they are important, think that principals should include teachers in school activities. Also, teachers who feel mutual warmth with their principal think that a principal should be friendly with his teachers. Teachers who feel that their principal is competent think also that the principal should not control the activities of the teacher.

g. Teacher to community.

Teachers who try to control the principal think that teachers should not conform to the desires of the community. This is also true of teachers who do not respect their principal's competence and do not feel that it is important for him to respect theirs. Teachers who feel the principal is an important person or want him to feel they are important think that teachers should participate in community affairs. Teachers who feel warmth and liking for their principal think that teachers should also be friendly with the community.

h. Administrator to community.

Teachers who like a lot of contact with the principal or who want him to feel they are important think that the community should be involved in school activities. Teachers who respect the principal's competence and want him to respect theirs do not think a principal should conform to community opinion. Finally, teachers who like the principal feel strongly that a principal should be friendly with the community.

In summary, the hypothesis has stronger confirmation here than in the previous test. It is confirmed more for inclusion and affection than for control, and much more for feelings than behavior. However, control on the feeling level did predict well for administrator to teacher and for teacher and administrator to community. Many of the correlations indicate that the way the teacher behaves and feels toward her own principal is the way she thinks things ought to be, or the way she thinks principals ought to feel toward others.

3. Cognitive styles are correlated with general interpersonal relations orientations (MBTI, FIRO-B).

Subjects for this analysis were teachers, parents, and administrators. The total sample numbers 521 subjects.

Overall, 13 of 24 correlations are significant (54%). The significant correlations are about equally distributed over the I, C, A areas, but the areas of extraversion, intraversion, and of thinking-feeling are much better predicted by FIRO-B than are sensing-intuiting and judging-perceiving. Only one scale of each pair is included in Table 56 because the polar scale is essentially the negative of it. Thus it appears that there is considerable relation between interpersonal orientations and cognitive styles.

The Meaning of the Results

a) Extraversion

People who enjoy contact with others, who try to control people and who enjoy close, personal relations tend to find their sources of value and enjoyment in the external world, rather than from internal introspective experience.

b) Sensing

People who try to control and influence others prefer a figurative, imaginative, unique reading of the world rather than literal, factual and conventional.

c) Feeling

People whose judgments are mediated by rationality and judiciousness, rather than compassion and emotion, like contact with people; like close, personal relations; like to be controlled by others and do not try to control others.

d) Judging

People who include others in their activities or who try to control others prefer to act from preformed notions and create an anticipated and ordered world.

Thus, there is a significant relation between FIRO-B and MBTI. The most significant relations exist in the areas of extraversion and feeling. The extraversion correlations are less interesting because the variables contributing to the correlation coefficient are fairly similar, all having to do with activity and outgoingness.

4. Cognitive styles are correlated with educational values (MBTI, VAL-ED).

These variables are possibly results of the same cause, interpersonal orientations, and therefore may be correlated. The results are given in Table 57. Subjects for this analysis are teachers, parents, and administrators. The administrator group totals 40 subjects and the teacher-parent group 304. All correlations involve the responses of at least 340 subjects.

Table 56

The Relations Between Cognitive Styles and General Interpersonal Orientations

	Extraversion	Sensation	Feeling	Judging
e^I	39*	-06	-13*	11
w^I	32*	03	-08*	04
e^C	16*	28*	16*	11*
w^C	00	03	-17*	-07
e^A	37*	01	-13*	-03
w^A	26*	06	-17*	-02

Table 57

Correlations of Educational Values and Cognitive Style

	Imp	Mind	Subj	School-Child			Teacher-Child			Administrator-Teacher			Administrator-Community			Teacher-Community		
				I	C	A	I	C	.A	I	C	A	I	C	A	I	C	A
E	-04	.14	-04	05	01	17*	06	07	04	04	10*	22*	13*	07	07	04	01	13*
S	.00	-12	19*	13	-20*	03	-22*	28	-05	-20*	35*	-13*	-13*	21*	-14*	03	31*	05
T	-02	.00	-09	-08	10*	-13*	-03	04	-11*	-07	02	04	02	09	-12*	02	06	-09
J	.11	-12	16	12*	-14*	-03	-13*	15*	03	-07	22*	05	04	11*	-01	08	21*	-03

Of the 72 predicted correlations, 26 are significant at the .05 level (36%). The number of significant correlations by value area does not indicate striking differences, being respectively 7,5,6,6,3,0,0,1, except that again the non-interpersonal values are not as well correlated as the interpersonal. However, the biggest difference from previous results is that the control area is the best predicted. Out of 20 possible significant correlations each (excluding Imp, Mind, Subj) inclusion, control and affection had respectively 6, 12 and 8. This leads to the interesting finding that educational values in the area of control are related to cognitive style more than to interpersonal orientations. A closer look at this result may clarify the picture.

a) School to child

People who prefer an ordered world feel that children should be taught to get along socially.

People who feel children should be taught autonomy and independence are characterized by an imaginative view of the world, spontaneous activity and rational judgments.

People who find sources of value in the external world and who prefer casual, spontaneous actions feel that children should be taught to express affection openly.

b) Teacher to child

People who are imaginative and who are spontaneous feel that all children should be treated the same by their teacher. These same people also feel that the teacher should not control the activities of the child but rather should allow great initiative.

Finally, those whose judgments are mediated by compassion and emotion feel that teachers should express feelings of affection toward the children.

c) Administrator to teacher

The person who prefers the literal, factual, conventional view of the world feels that the principal should not include teachers in school activities.

People who believe that the administrator should control the activities of the teacher are characterized as those whose sources of value and enjoyment are external to themselves, who are factual, literal and conventional, and who prefer an ordered world.

Those whose sources of enjoyment are external and who prefer a figurative, imaginative perception of the world think that the principal should be friendly with the teachers.

d) Administrator and teacher to community

Having the community involved in school activities is a value held by extraverts and imaginative people.

Literal, conventional people and those preferring an ordered world feel that principals and teachers should conform to community desires.

People whose judgments are mediated by emotion feel that administrators should be personal and friendly with the community, while the feeling that teachers should become personally involved in the community is held by extraverts, those whose sources of value are external.

Conclusion

To test the hypothesis of interpersonal symbolism, an attempt was made to relate several interpersonal orientations to the values an individual held regarding certain areas of education. In particular, the predictors used were a) general orientations to interpersonal behavior (FIRO-B); b) a specific orientation toward interpersonal behavior and toward interpersonal feelings exemplified by attitudes of a teacher toward her principal (PAI); and c) cognitive attitudes toward the world and toward coping with experience (MBTI). The latter is indirectly interpersonal as indicated above, and it shall be included with those measures for purposes of this analysis.

The results of the various sub-hypotheses may be examined in several ways to discover the antecedents of educational values. An overall look reveals that expressed feeling on PAI--how the teacher feels about his principal--is the best predictor of almost every area of educational values. The second best overall predictor is expressed behavior toward the principal--how the teachers act toward the principal. The third best overall predictor is the sensing-intuiting scale of MBTI--whether a person is factual or imaginative. This is especially effective in the area of relations between teacher and child, administrator and teachers, and teacher and community.

The relative effectiveness of the predictors is even more evident when the interpersonal areas are considered separately. In the area of inclusion, over all the value areas, the PAI scales are the best predictors, especially the feelings and behavior the teachers want from the principal. Expressed inclusion on FIRO-B is also good in this area. In affection, there is a similar pattern, in that the PAI scales headed by expressed feeling toward principal are the best predictors, followed by the FIRO-B scales.

However, in the control area the picture is much different. Here the best predictors are the MBTI scales of sensing and judging, which are of no potency whatever in the areas of inclusion and affection. Table 58 presents the rank order of predictiveness of each predictor, assigned according to the magnitude of mean correlation coefficient.

Table 58

Rank Order of the Effectiveness of Predictors of Educational Values

		By Areas of Educational Relations					By Interpersonal Areas		
		School to Child	Teacher to Child	Administrator to Teacher	Teacher to Community	Administrator to Community	Inclusion	Control	Affection
FIRO B	expressed	4	6	6	6	5	4	5.5	5
	wanted	8.5	8.5	9	4	4	7	8	4
PAI	expressed behavior	6	4.5	3.5	3	1	5	5.5	2
	wanted behavior	3	3	3.5	7	6	2	10	3
	expressed feeling	1	1	1	1	2	3	3	1
	wanted feeling	2	4.5	5	5	3	1	4	6
MBTI	Extraversion	8.5	10	7	9	8	9	9	7
	Sensing	5	2	2	2	7	6	1	9
	Thinking	7	8.5	10	10	10	10	7	8
	Judging	10	7	8	8	9	8	2	10

Another approach to understanding the interpersonal antecedents of educational values is to consider the personality constellations that have emerged from this analysis and describe the set of educational values that goes with them. The description below is considerably oversimplified but is consistent with the results.

(a) Positive interpersonal orientation. These people have a good feeling about others, in that they feel other people are important, likeable and competent, and they want others to feel the same about them. Also with respect to inclusion and affection they like to be in close contact with people. The educational values they hold include: children should learn to be socially adaptable and to express affection openly; teachers should treat all children equally and should express affection openly to them; administrators should include teachers in school activities, be personally friendly with teachers and not control their activities; teachers and administrators should not be conformists to community opinion, and they should be participating and friendly with the community.

(b) Orderly and conventional orientation. These people prefer a literal, factual, conventional approach to life's problems and to a lesser extent create an anticipated and orderly world, and prefer to act from preformed notions. These people hold consistent educational values centering around control. They believe that children should learn respect for authority, and to be popular; teachers should control the activities of the children, but treat each child as an individual; administrators should retain complete authority over teachers' activities; teachers should never give the appearance of nonconformity to the community; and the administrator should never do anything that an important part of the community is against.

SUMMARY AND CONCLUSIONS

This report presents the results of a pilot study of the problem of administrator selection in the field of education. The issue was conceptualized as one of understanding the interaction of the school administrator with a number of salient people--school board members, parents, teachers, and others directly relevant to the educational administrator. An understanding of these administrative dynamics seems essential before any applied work, such as selection or training of administrators, can be undertaken successfully.

It also seemed important to develop a theory of administrative interaction for organizing the investigation. To that end, the FIRO theory of interpersonal behavior (Schutz, 1958) was used as a starting point since it deals with phenomena of interpersonal behavior, a central aspect of the administrator's job. The theory was considerably revised and extended during the course of the pilot study. In particular, expansion was necessary in the direction of incorporating intellectual and cognitive factors, and sociological dimensions, although the latter have not yet been extensively integrated into the theory.

The pilot study utilized four school districts in California, chosen on the basis of dissimilarity and availability. In each of these districts a battery of questionnaires was administered to a number of administrators, parents, teachers, school board members, and community leaders. Administration of the tests at three of the school districts was accomplished with the cooperation of personnel from the faculty of one of the California state colleges near the district. The questionnaires covered the areas required to test hypotheses derived from FIRO theory, namely, interpersonal behavior, educational values, childhood behavior, defense mechanisms, sociological and biographical data, intelligence and cognitive style, ratings and other evaluations of the administrators. The full battery required from nine to twelve hours of the subjects' time and was usually given in three or more sessions. At least one questionnaire was taken by more than 1300 respondents in the four school districts.

Hypotheses were tested almost exclusively by the correlational method, a procedure that proved somewhat inadequate for the type of data gathered. A large amount of time was spent in developing new instruments that were at once applicable to the educational administration situation, and consistent with FIRO theory. This involved about 80 scales in all. Guttman scaling was the method of scale construction used. Choice of this method required the development of a computer program which could scale the data according to this technique. Program development was completed and both the scales and the correlations were obtained using the IBM 704 at the University of California, Berkeley. The program for Guttman scaling, written with the assistance of Eleanor Krasnow, is now generally available.

The hypotheses tested concerned the administrator's past interpersonal relations, his present personal characteristics and educational values, especially in relation to his interactors, and the devleopment of his interpersonal relations with his co-workers.

Because of the large amount of data presented in this report, it is difficult to summarize results accurately without including so many qualifications that the summary loses its terseness and its utility. For this reason the overall results will be summarized in narrative form with the understanding that the presentation contains some necessary oversimplifications. A more accurate statement may be found in the conclusions following each hypothesis, or ultimately by reference to the data themselves.

Parents, and especially teachers, seem to like and respect principals who are similar to themselves with regard to how they handle difficult situations. If the teacher is the kind of person who acknowledges difficult situations but tends to discount their significance, usually through using intellectual explanations, he thinks well of a principal who operates in the same way. If the principal is a "logical" person who handles difficult situations by denying their existence, he is well regarded by someone who is not so logical, who does acknowledge problems and becomes concerned over them. Apparently he admires the calm, efficient, controlled manner in which the principal operates.

Another important determinant of a parent's or a teacher's liking and respect for a principal is the similarity of their values regarding how people in the school situation should relate to each other. High regard stems from agreement on how the teacher should treat the child, how the administrator should treat the teacher, how the administrator and the teacher should relate to the community, and what kind of child should emerge from the schools. These attitudes apply to the areas of amount of contact, amount of control, and amount of warmth and closeness that should exist among these people and groups.

Attitudes toward education are closely related to the way in which a person perceives others. Two groups of people seemed to emerge from a study of this area. One group displays positive attitudes toward others; they feel that people are important, likeable and competent, and they want others to feel the same about them. They prefer, furthermore, to be in close personal contact with people. The educational values they hold include: children should learn to be socially adaptable and to express affection openly; teachers should treat all children equally and should express affection openly to them; administrators should include teachers in school activities, be personally friendly with teachers, and not control their activities; teachers and administrators should not be conformists to community opinion, and they should participate and be friendly with the members of the community.

The other group has a more conventional orientation. These people prefer a literal, factual, conventional approach to life's problems. To a lesser extent, they create an orderly world for themselves and prefer to act from preformed notions. They hold consistent educational values centering around control, including the beliefs that children should learn respect for authority, and be popular; teachers should control the activities of the children, but treat each child as an individual; administrators should retain complete authority over teachers' activities; teachers should never give the appearance of nonconformity to the community; and the administrator should never do anything that an important part of the community is against.

An interesting phenomenon appears when turning from these characterizations of the administrative situation at a given point in time to the development of the administrator's relations to others. The primary determinant of a new administrator's success, in the sense of being rated high by teachers, is his compatibility with them regarding initiating contact. If he likes to be the one to initiate first contacts, and the teachers like to be invited, the principal's chance of success is good. The same holds if he prefers to be invited, and the teachers like to take the initiative.

After the principal has been on the job for a year or two, a different aspect becomes a more important determinant of his success, as seen by the teachers. Conflict arises if there is a power struggle between principal and teachers, or a power vacuum. The best situation during these years occurs when either the principal is the kind of person who likes to take charge of things and the teachers want strong leadership; or else the teachers like to be the dominant force in school activities and the principal wants to follow their lead.

This area of interpersonal relations, although usually the most obvious to the outside observer, is not the one most pertinent for determining administrative success for a veteran principal. For a principal of several years' tenure, teachers' opinions of his overall ability are primarily a function of his warmth and personal closeness. He is well regarded if he initiates close, personal friendships to the degree that teachers want to be close; or else he is well regarded if he accepts personal overtures to the extent that teachers want to offer them. Although this area of affection is always significant, it is especially so for principals with more seniority.

In attempting to understand the origins of administrative behavior, attention to the administrator's earliest experience in interpersonal relations is helpful. It seems that there is a considerable carryover of feelings from the original family situation to the later administrative context. Ways of feeling about others are transferred from childhood to adulthood much more than actual behavior patterns. For example, the feelings displayed by the administrator toward the men and women working with him often seem determined by how his parents felt toward each other. Similarly, some of his early feelings toward his parents become a part of his feelings toward significant others in the later work situation. There is some indication also that the administrator continues to elicit from others feelings similar to those he elicited as a child from his parents.

This summarizes the results to date. Work is now in progress to apply the insights and findings yielded by the pilot project to a large-scale study covering a representative sample of school districts in California, including the more systematic introduction of sociological variables for characterizing each district.

APPENDIX A

Names and Descriptions of Measures Used

FIRO-B
(Fundamental Interpersonal Relations Orientation - Behavior)

See p. 64 for discussion

(e^{I})	Expressed inclusion	"I try to be with people."
(w^{I})	Wanted inclusion	"I like people to invite me to things."
(e^{C})	Expressed control	"I take charge of things when I'm with people."
(w^{C})	Wanted control	"I let other people decide what to do."
(e^{A})	Expressed affection	"I try to have close relationships with people."
(w^{A})	Wanted affection	"I like people to act close and personal with me."

PAI SCALES

(Perception of Administrative Interaction)

See p. 50

Principal's Relations with Teachers

			Reproducibility
Behavior			
(EIB: P to T)	Expressed inclusion behavior - principal to teacher	Principal invites teachers to parent conferences	.88
(ECB: P to T)	Expressed control behavior - principal to teacher	Principal has strong influence over teachers in school policies, programs	.87
(EAB: P to T)	Expressed affection behavior - principal to teacher	Principal is emotionally close when dealing with teachers	.90
(WIB: P fr. T)	Wanted inclusion behavior - principal from teacher	Principal wants the teachers to invite him to parent conferences	.90
(WCB: P fr T)	Wanted control behavior - principal from teacher	Principal likes teachers to have final word on school programs and policies	.89
(WAB: P fr T)	Wanted affection behavior - principal from teacher	Principal wants teachers to be emotionally close in their dealings with him	.91
Feelings			
(EIF: P to T)	Expressed inclusion feeling - principal to teacher	Principal is interested in teacher	.90
(ECF: P to T)	Expressed control feeling - principal to teacher	Principal doesn't admire teacher's abilities	.94
(EAF: P to T)	Expressed affection feeling - principal to teacher	Principal likes the teachers	.90
(WIF: P fr T)	Wanted inclusion feeling - principal from teacher	Principal wants teachers to be interested in him	.91
(WCF: P fr T)	Wanted control feeling - principal from teacher	Principal doesn't want teachers to admire his abilities	.94
(WAF: P fr T)	Wanted affection feeling - principal from teacher	Principal wants the teachers to like him	.92

Principal's Relations with Parents

Behavior

			Reproducibility
(EIB: P to Par)	Expressed inclusion behavior - principal to parent	Principal takes an active part in parent associations	.89
(ECB: P to Par)	Expressed control behavior - principal to parent	Principal has strong influence on activities, opinions of parents	.89
(EAB: P to Par)	Expressed affection behavior - principal to parent	Principal is emotionally close when dealing with parents	.91
(WIB: P fr. Par)	Wanted inclusion behavior - principal from parent	Principal wants active part in parent associations	.88
(WCB: P fr. Par)	Wanted control behavior - principal from parent	Principal wants parents to make decisions regarding parent groups, activities	.89

(Note: There is at present no WAB: P fr. Par scale)

Feelings

(EIF: P to Par)	Expressed inclusion feeling - principal to parent	Principal is interested in the parents	.91
(ECF: P to Par)	Expressed control feeling - principal to parent	Principal doesn't feel he can rely on parents	.93
(EAF: P to Par)	Expressed affection feeling - principal to parent	Principal likes the parents	.93
(WIF: P fr. Par)	Wanted inclusion feeling - principal from parent	Principal wants the parents to be interested in him	.92
(WCF: P fr. Par)	Wanted control feeling - principal from parent	Principal doesn't want parents to admire his abilities	.95
(WAF: P fr. Par)	Wanted affection feeling - principal from parent	Principal wants parents to like him	.91

Teacher's Relations with Principal

			Reproducibility
Behavior			
(EIB: T to P)	Expressed inclusion behavior - teacher to principal	Teachers invite principal to parent conferences	.89
(ECB: T to P)	Expressed control behavior - teacher to principal	Teachers have strong influence over principal in school policies, programs	.88
(EAB: T to P)	Expressed affection behavior - teacher to principal	Teachers are emotionally close in their dealings with the principal	.89
(WIB: T fr. P)	Wanted inclusion behavior - teacher from principal	Teachers like principal to confer with them on administrative matters	.89
(WCB: T fr. P)	Wanted control behavior - teacher from principal	Teachers want the principal to have final word on school programs and policies	.88
(WAB: T fr P)	Wanted affection behavior - teacher from principal	Teachers want the principal to be emotionally close in his dealings with them	.92
Feelings			
(EIF: T to P)	Expressed inclusion feeling - teacher to principal	Teachers are interested in principal	.92
(ECF: T to P)	Expressed control feeling - teacher to principal	Teachers mistrust principal's abilities	.95
(EAF: T to P)	Expressed affection feeling - teacher to principal	Teachers like the principal	.90
(WIF: T fr. P)	Wanted inclusion behavior - teacher from principal	Teachers want the principal to be interested in them	.92
(WCF: T fr. P)	Wanted control feeling - teacher from principal	Teachers don't want the principal to admire their abilities	.95
(WAF: T fr. P)	Wanted affection feeling - teacher from principal	Teachers want the principal to like them	.93

Parents' Relations with Principal

Behavior			Reproducibility
(EIB: Par to P)	Expressed inclusion behavior - parent to principal	Parents invite the principal to take an active part in PTA	.90
(ECB: Par to P)	Expressed control behavior - parent to principal	Parents have strong influence on school activities, policies	.89
(EAB:Par to P)	Expressed affection behavior - parent to principal	Parents are emotionally close in dealings with the principal	.93
(WIB: Par fr. P)	Wanted inclusion behavior - parent from principal	Parents want the principal to include them in school activities, policy making	.91
(WCB : Par fr. P)	Wanted control behavior - parent from principal	Parents want the principal to make most of the decisions at parent group meetings	.89
(WAB: Par fr. P)	Wanted affection behavior - parent from principal	Parents want the principal to be emotionally close in dealing with them	.94
Feelings			
(EIF: Par to P)	Expressed inclusion feeling - parent to principal	Parents are interested in the principal	.89
(ECF: Par to P)	Expressed control feeling - parent to principal	Parents mistrust the principal's abilities	.96
(EAF: Par to P)	Expressed affection feeling - parent to principal	Parents like the principal	.89
(WIF: Par fr. P)	Wanted inclusion feeling - parent from principal	Parents want the principal to be interested in them	.94
(WCF: Par fr. P)	Wanted control feeling - parent from principal	Parents don't want the principal to be interested ih them	.91
(WAF: Par fr P)	Wanted affection feeling - parent from principal	Parents want the principal to like them	.93

Measures of Interactor's Personal Satisfaction with Administrator

Derived from PAI, see p. 53

(Sat-IB)	Interactor's satisfaction with the degree to which administrator includes him
(Sat-CB)	Interactor's satisfaction with the degree to which administrator assumes authority over him
(Sat-AB)	Interactor's satisfaction with the degree to which administrator acts warmly and affectionately toward him
(Sat-IF)	Interactor's satisfaction with the degree to which administrator takes an interest in him
(Sat-CF)	Interactor's satisfaction with the degree to which administrator admires his competence
(Sat-AF)	Interactor's satisfaction with the degree to which administrator likes him

VAL-ED

(Values in Education)

See p. 149

Nature of ?Education

(Mind)	Scope of school's domain	Educators should treat with the whole child, not just his mind.
(Subj.)	Nature of educational concern	Schools should concern themselves with expert presentation of subject matter, not with pedagogic devices.
(Imp.)	Importance of education	Learning something has an intrinsic value in itself, aside from practical benefits.

School-Child Relations

		School should:
(SC-I)	School-Child: Inclusion	teach child to be socially accepted
(SC-C)	School-Child: Control	develop child to become autonomous
(SC-A)	School-Child: Affection	encourage child to express warm feelings openly

Teacher-Child Relations

		Teacher should:
(TC-I)	Teacher-Child: Inclusion	treat all children equally
(TC-C)	Teacher-Child: Control	control the child's classroom activities
(TC-A)	Teacher-Child: Affection	express feelings openly to children

Administrator-Teacher Relations

		Administrator should:
(AT-I)	Admin-Teacher: Inclusion	include teachers on school activities
(AT-C)	Admin-Teacher: Control	retain complete authority over activities of teachers
(AT-A)	Admin-Teacher: Affection	be personally friendly with teachers

Teacher-Community Relations

		Teacher should:
(TCm-I)	Teacher-Comm: Inclusion	join in community affairs
(TCm-C)	Teacher-Comm: Control	conform to community values
(TCm-A)	Teacher-Comm: Affection	become personally friendly with community members

Administrator-Community Relations

		Administrator should:
(ACm-I)	Admin-Comm: Inclusion	inform community of policy and changes in policy
(ACm-I)	Admin-Comm: Control	never do anything that an important part of the community is against
(ACm-A)	Admin-Comm: Affection	get to know community members personally

PAI-JOB

(Perception of Administrative Interaction with Job)

Effectiveness Measure

See p. 44

			Reproducibility
(Com)	Communication	Communication is facilitated among staff, parents, students, so that they are free to express feelings and opinions; to make suggestions; to exchange information, facts and ideas. (Communication skill).	.90
(Adm)	Administration	There are adequate systems and policies governing teacher supervision; guidance and discipline of students; maintenance of school, availability of supplies. (Administrative skill)	.90
(Ed.Ld)	Instructional leadership	There are efforts made to improve the quality of the educational program in that there is encouragement and stimulation of teachers; help is given readily when needed; teaching materials are easily available. (Instructional leadership)	.90
(Solv)	Problem solving	Context is present in which problems are readily perceived; objectively and critically considered; and resolved with an eye to possible unique solutions. (Problem solving ability).	.94
(Job)	Sum of four above	Total ability on administrative tasks	-
(Rate)	Overall rating	Direct assessment on a 0-9 scale of the administrator's overall effectiveness.	-

COPE

(Coping Operations Preference Enquiry)

Measure of Preferred Defense Mechanisms

See p. 82

(D)	Denial	Denies presence of feeling ("He's not worried. He feels this isn't a very important problem.")
(Is)	Isolation	Acknowledges feelings but treats them intellectually ("He may do too many things with others, but he doesn't feel this has much to do with how much he enjoys people.")
(Pr)	Projection	Attributes feelings or motives to others ("Although he may do too many things with others, he feels this is because other people expect him to.")
(Re)	Regression	Relies on others to solve his problems ("He realizes that he may do too many things with others, but with help from someone more experienced he could change.")
(Ta)	Turning-against-self	Blames self unrealistically and punishingly ("He realizes that the fault for doing too many things with others lies completely with himself and with no one else.")
(In)	Intellectualization	Gives abstract, intellectual, impersonal reasons ("He feels that he does too many things with other people mainly because in our present-day society one's whole life is oriented toward others.")

MBTI

(Myers-Briggs Type Indicator)

See p. 67

Issued by: Educational Testing Service
Princeton, N.J.

(E)	Extroversion	Sources of value and enjoyment are external
(I)	Introversion	Sources of value and enjoyment are internal
(S)	Sensing	Prefers literal, factual, conventional reading of the world
(N)	Intuiting	Prefers figurative, imaginative, unique reading of the world
(T)	Thinking	Judgements are mediated by rationality and judiciousness
(F)	Feeling	Judgements are mediated by compassion and emotion
(J)	Judging	Creates anticipated and ordered world; prefers to act from preformed notions
(P)	Perceiving	Prefers casual, changing world; prefers to act immediately and spontaneously

Measures of Intellectual Efficiency

See p. 66

(Voc)	Vocabulary Test-GT*	20 items
	I.E.R. Word Knowledge Test**	100 items
(Info)	General Information Test Form BB: General Intelligence Examination	60 items
(Reas)	Arithmetic Reasoning Ability Form BB: General Intelligence Examination	30 items
(IQ)	Sum of the above	

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* Administered to Berkeley Sample
** Administered to San Diego, Huntington Beach, Laguna Salada, sample

APPENDIX B

Psychometric Properties of Instruments Used

This appendix sets forth some of the psychometric properties of the testing instruments used in the present study. The minimal standards required of psychological tests, essentially those relating to validity and reliability, have been described in the APA's Technical Recommendations for Psychological Tests and Diagnostic Techniques (1954). Supplementary recommendations have been made more recently by Campbell (1960). This investigation was planned and carried out in light of these suggestions.

Validity. There are several kinds of validity, and it is useful to distinguish at least two broad categories: practical and construct validity. Under the first category are subsumed what have traditionally been called predictive and concurrent validity: the correlation of test scores with some independent criterion measure obtained from the same subjects. The purpose of this kind of validation is the prediction of some criterion measure which is usually not subjected to investigation itself but accepted as given (in this study, the criterion measures as well as the predictor instruments have been analyzed--see pp. 11-63 of this report). Inasmuch as the present study endeavors to find, for instance, a relationship between administrative effectiveness and some personality measure, it engages also in the practical validation of the personality measure used. For example, the confirmation of a predicted relationship between the extrovert scale of the MBTI and the effectiveness rating obtained for the principal confirms also the concurrent validity of the extrovert scale of the MBTI for the conditions of the present study. The practical validity of the instruments used is thus given in the body of this report wherever the prediction of a specific criterion by an independent measure has been confirmed.

The method of construct validity has been introduced to specify the research procedures appropriate for assessing the validity of tests interpreted in terms of attributes for which there is no socially institutionalized criterion (e.g. college grades). The concern of the validational effort is not primarily with the prediction of some criterion but with the elucidation of the hypothesized trait or syndrome (construct) underlying the test. Construct validation is not essentially different from the general scientific procedures for developing and confirming theories. Thus, if the test items represent an adequate sample of a universe of items defining the construct, and if predictions made on basis of the construct and its surrounding theoretical framework are confirmed via the test items, construct validity has been conferred upon the test. In the present study, most of the instruments were derived from FIRO theory to represent certain of its constructs and were used to confirm (or disconfirm) predictions flowing from the theory itself. The data reported in the body of this report may thus again be offered as evidence of construct validity insofar as they have confirmed the various predictions made. An example is the prediction of the nature of interpersonal relationship in the educational setting from knowledge of the person's early interpersonal behavior toward his parents. The predictions are made from a theory of interpersonal behavior (postulate of relational continuity) and are mediated by items derived from and representing the constructs of the theory.

An additional kind of validity has been conceptualized by Campbell and Fiske (1959) as discriminant validity, i.e., the requirement that a test not correlate too highly with measures from which it is supposed to differ. This requirement refers to high correlations with trait-irrelevant factors such as intelligence, response sets, social desirability factors, etc. For example, if a test of "dominance" correlates highly with test intelligence, it must be concluded that the personality test measures to a large extent test intelligence rather than the trait of dominance. These considerations led Campbell (1960) to make a number of specific suggestions, of which those concerning test intelligence and social desirability factors are applicable to the instruments used in the present study. For the reasons given above, low correlations of a new test with both test intelligence and social desirability constitute evidence favorable to validity. Edwards (1957) has presented evidence necessitating the investigation of the possible social desirability component of self-report tests. Briefly, it appears that the tendency to describe oneself in a favorable light, no matter what the trait-specific content of the test, is a very general one. Fortunately, however, this tendency is limited by the nature of the test itself. That is, if the test items are neutral with respect to social desirability, the need of correlation with a social desirability scale does not seem to arise. Since only a limited number of subjects were available for this part of the investigation, the instruments considered most likely to be saturated with social desirability factors were studied to the temporary exclusion of the tests not likely to be so contaminated.

The well-known Thorndike Intelligence Examination and Vocabulary Test, and the 39-item Social Desirability Scale developed by Edwards were used for this analysis.

Reliability. The investigation of test reliability may be approached from two points of view, each producing evidence of a different kind. (1) One may inquire into the stability of test scores over a period of time to establish whether or not the test classifies the person in the same category on the two occasions. A low stability (test-retest) coefficient indicates that the functions measured by the test fluctuate from time to time or, more seriously, that the test is affected by fluctuating factors other than the ones the test tries to measure. (2) If the test claims to measure an underlying construct, it becomes pertinent to ask also whether or not the test is internally consistent. That is, if the items are said to represent any hypothesized construct, they must show homogeneity of content and thus consistent intercorrelations. In the present study, which used the Guttman scaling technique extensively in the development of tests, the coefficient of reproducibility (Rep) is offered as evidence of internal consistency. To the extent that an internal consistency coefficient reflects homogeneity of item content, it is relevant also to the assessment of construct validity.

FIRO-B. The data on discriminant validity and reliability for FIRO-B are presented in Table 59.

Table 59

Psychometric Properties of FIRO-B
(Subjects: College Students, Teachers, Parents)

Scale	Reproduc. N=1543	Stability N=112	Corr. with Intelligence N=129
e^I	.94	.76	.01
e^C	.94	.71	.27**
e^A	.94	.78	-.12
w^I	.94	.80	.07
w^C	.93	.75	-.09
w^A	.94	.82	-.17**

**$p < .01$

An extensive discussion of the psychometric properties of the FIRO-B questionnaire has already been given by Schutz (1958, pp. 66-79). For the sake of completeness, the reproducibility coefficients and test-retest coefficients reported in that source are shown here again. It will be noted that both of these measures exceed the significantly greater than chance lower limit ($Rep \geq .79$; $r_{tt} \geq .75$) and that this questionnaire may therefore be considered as reliable from both the internal consistency and stability point of view. The correlations with test intelligence, although reaching the .01 level of statistical significance in two cases, are sufficiently low (accounting at the very most for only 7% of the variance) to indicate that the questionnaire has adequate discriminant validity with respect to test intelligence.

Val-Ed. Table 60 presents the data for Val-Ed.

Table 60

Psychometric Properties of VAL-ED
(Subjects: Principals, Teachers, Education Students)

Scales	Reproduc. N=400	Stability N=56	Corr. with Soc. Desir. N=61	Corr. with Intelligence N=121
SC:I	.89	.62	-.05	-.22*
C	.87	.43	.32**	.18*
A	.87	.79	-.16	-.20*
TC:I	.90	.75	-.13	.02
C	.87	.77	.00	-.02
A	.90	.72	.00	-.16
AT:I	.88	.80	.00	-.03
C	.90	.76	-.09	-.29**
A	.88	.67	-.05	-.07
TComm:I	.90	.61	-.11	.00
C	.91	.74	-.22	-.26**
A	.91	.80	.08	.08
AComm:I	.92	.74	.40**	-.06
C	.90	.63	-.07	-.10
A	.90	.72	.07	.05

* $p < .05$
** $p < .01$

The internal consistency of this questionnaire appears entirely adequate in that none of the Reps are below the minimum acceptable limit. This being a test of more recent development, some of the stability coefficients did not reach the usually required levels. This is especially true for the scales relating to values held concerning the school's treatment of the child (SC-C) and the teacher's and administrator's relations with the community (TCm-I, TCm-C). It is intended to revise these scales to improve their stability. The social desirability component of the VAL-ED questionnaire is generally negligible; in only two cases do the correlations reach conventional levels of statistical significance (SC-C, ACm-I). While it may thus be said that the attitudes of education students regarding the school's treatment of the child and the administrator's inclusion of the community in school affairs are to some extent (.32, .40) influenced by social desirability considerations, the coefficients are not sufficiently high to force the conclusion that even these two scales measure trait-irrelevant rather than trait-relevant factors. Similarly, the correlations with intelligence remained well below the level at which the discriminant validity of the questionnaire could be called into question.

COPE. Table 61 presents the psychometric data for COPE.

Table 61

Psychometric Properties of COPE
(Subjects: Teachers, Education Students)

Scales	Stability* N=18	Corr. with Intelligence N=115
Denial (D)	.65	.17
Isolation (IS)	.74	-.10
Projection (P)	.58	-.04
Regression (R)	.45	-.01
Turning Against Self (T)	.85	-.08
Intellectualization (IN)	.70	.03

*rho coefficients

Since the COPE questionnaire has not yet been subjected to scalogram analysis, reliability information is available only with respect to stability over time (the estimation of split-half reliability is prevented by the form of the test). Since only a small number of subjects was available for the investigation of this instrument, the test-retest coefficients must be considered as tentative only. It will be noted that some of the scales do not possess sufficient stability; further work is planned to remedy this deficiency. The small size of the correlations with intelligence indicates conclusively that the COPE questionnaire is not contaminated with irrelevant intelligence variance.

MBTI. Table 62 presents the psychometric data for the MBTI.

Table 62

Psychometric Properties of MBTI
(Subjects: College Students, Teachers, Parents)

Scales	Split-Half[1] N=146	Stability[1] N=100	Corr. with Soc. Desir. N=87	Corr. with Intelligence N=130
E	.88	.95	.38**	-.13
I			-.46**	.08
S	.86		.10	-.38**
N			-.21*	.39**
T	.78		.21*	.10
F			-.35**	-.14
J	.82		.14	-.04
P			-.19	.07

[1] These data were provided by John Caffrey, Palo Alto.

* $p < .05$
** $p < .01$

The internal consistency (split-half) and stability of the MBTI were ascertained by its authors and were estimated from difference scores derived by subtracting the obtained score for E from that of I, etc. There are thus only four reliability coefficients, one each for E-I, S-N, T-F, J-P. Information regarding test-retest reliability was provided only as an average obtained from a number of reliability studies. Both kinds of reliability are entirely within acceptable limits. In the case of the MBTI, the social desirability component is somewhat higher than in the case of the FIRO instruments (-.35, .38, -.46) but not sufficiently pervasive to impair the discriminant validity of the instrument seriously (Edwards seems to disregard correlations below .65). Similarly, the relationship of test intelligence to the sensation and intuition scales is somewhat higher (-.38, .39) than might be desirable but again not sufficiently strong to invalidate the instrument.

It is also possible to consider these correlations from the point of view of the theoretical assumptions underlying the test. Thus, one might argue that the person who is primarily oriented toward the outside world (extroversion, sensation, thinking, judgment) is more attentive to what is socially desirable or undesirable than the person primarily oriented toward the self (introversion, intuition, feeling, perception). Accordingly, one would predict positive correlations between the first set of MBTI scales and social desirability, and negative ones for the second set. It will be noted that this is the pattern of correlations actually obtained. If this finding were confirmed upon replication, it would be evidence for the construct validity of the MBTI rather than an indication of some lack of discriminant validity.

LIPHE-9. Tables 63 and 64 give the psychometric data for LIPHE-9.

Table 63

Retest Reliability Coefficients for LIPHE-9, N=77
(Graduate Education Students)

	Behavior			Feeling			
	I	C	A	I	C	A	
E-MB	.72*	.72	.63	.53	.52	.40	.59
E-MC	.49	.72	.84	.41	.45	.43	.56
E-MS	.51	.64	.71	.43	.34	.51	.52
E-FS	.45	.60	.61	.31	.48	.53	.50
E-FC	.47	.68	.50	.53	.29	.37	.47
E-FB	.61	.67	.65	.38	.45	.61	.56
E-W(H)	.71	.48	.70	.71	.69	.78	.68
MB-E	.55	.74	.74	.81	.66	.60	.68
MC-E	.57	.82	.70	.54	.52	.66	.64
MS-E	.57	.32	.50	.48	.52	.66	.51
FS-E	.67	.66	.65	.42	.42	.54	.56
FC-E	.47	.76	.47	.44	.58	.40	.52
FB-E	.67	.55	.61	.32	.70	.57	.57
W-E	.63	.64	.69	.51	.32	.58	.56
	.58	.64	.64	.49	.50	.55	
		.62			.51		

.57

*Corrected for errors of grouping (Guilford, 1956, pp. 329-30).

Table 64

Correlations with Social Desirability for LIPHE-9, N=77
(Graduate Education Students)

	Behavior			Feeling			
	I	C	A	I	C	A	
E-MB	.15	.00	.18	.12	.14	.02	.10
E-MC	.13	-.05	.07	.22*	.21	.10	.13
E-MS	.08	-.02	.04	.24*	.26*	.08	.12
E-FS	.14	.03	.08	.31**	.07	.14	.12
E-FC	.13	-.01	-.01	.19	.04	.12	.08
E-FB	.23*	.13	.16	.18	.08	.14	.11
E-W	.19	-.12	.09	.06	.03	-.03	.07
MB-E	.15	.09	.13	.29**	.25*	.23*	.16
MC-E	.12	-.15	.20	.19	.19	.24*	.19
MS-E	.11	-.03	.22*	.03	.08	.03	.09
FS-E	.09	.07	.13	.16	-.02	.09	.07
FC-E	.23*	-.12	.14	.20	.06	.10	.14
FB-E	.10	-.14	.25*	.22*	.25*	.25*	.20
W-E	.07	-.06	.11	.09	.19	-.01	.08
	.14	-.03	.13	.18	.13	.11	
		.10			.14		
				.12			

* $p < .05$
** $p < .01$

Of the two parts of the LIPHE questionnaire (1 and 9), only the second part has so far been subjected to psychometric investigation. The first part, however, is so similar to the second that the evidence for the latter may be tentatively extrapolated to the first.

Table 63 presents the data on retest reliability for LIPHE-9. In evaluating these coefficients, it is important to keep in mind that they represent correlations between single items. Since the reliability of a test increases as its length increases, up to an optimal point, these coefficients cannot be expected to reach conventional magnitudes. Taking this feature into account, the magnitude of the stability coefficients appears satisfactory. The scaling of this instrument by the Guttman technique is now being planned and it is expected that the scaling operations will improve both the internal consistency and the stability of the LIPHE questionnaire.

The social desirability component of this instrument is quite negligible (see Table 64). The average correlation coefficient with the social desirability scale has a magnitude of only .12 and none of the coefficients for individual items exceeded .31 which is well below the limit considered crucial by Edwards. In slightly different terms, the percentage of variance in the LIPHE questionnaire accounted for by social desirability variance is only about 6%.

Conclusion. A few general remarks may be made in conclusion. Concerning the practical and construct validity of the instruments used in the present study, it may be pointed out that the results of the entire research effort are relevant to their evaluation. To the extent that the numerous predictions were borne out by the data, the instruments have been validated with respect to both their predictiveness and construct validity.

The discriminant validity of the instruments was overwhelmingly established by independent investigation. None of the tests considered was appreciably contaminated with trait-irrelevant factors, such as intelligence or social desirability response sets. It may be pointed out that these results stand in marked contrast to the results of similar investigations. Edwards found most of the personality scales he investigated to be highly correlated (in the .70's and .80's) with social desirability factors. More recently, Taylor (1961) showed that a number of well-known attitude scales are also saturated with social desirability response sets to an appreciable degree (.57 - .65).

The internal consistency of the tests scaled by the Guttman technique was satisfactory without exception. Considering that some of the tests are still in various stages of development, the retest reliabilities so far attained were acceptable in the majority of cases. It is recognized that individual scales are in need of further work.

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